

# Manufacturers Record

Industry Construction

Reg. U. S. Pat. Office



BALTIMORE, MD.

MARCH 24, 1932

## Dangerous Legislation

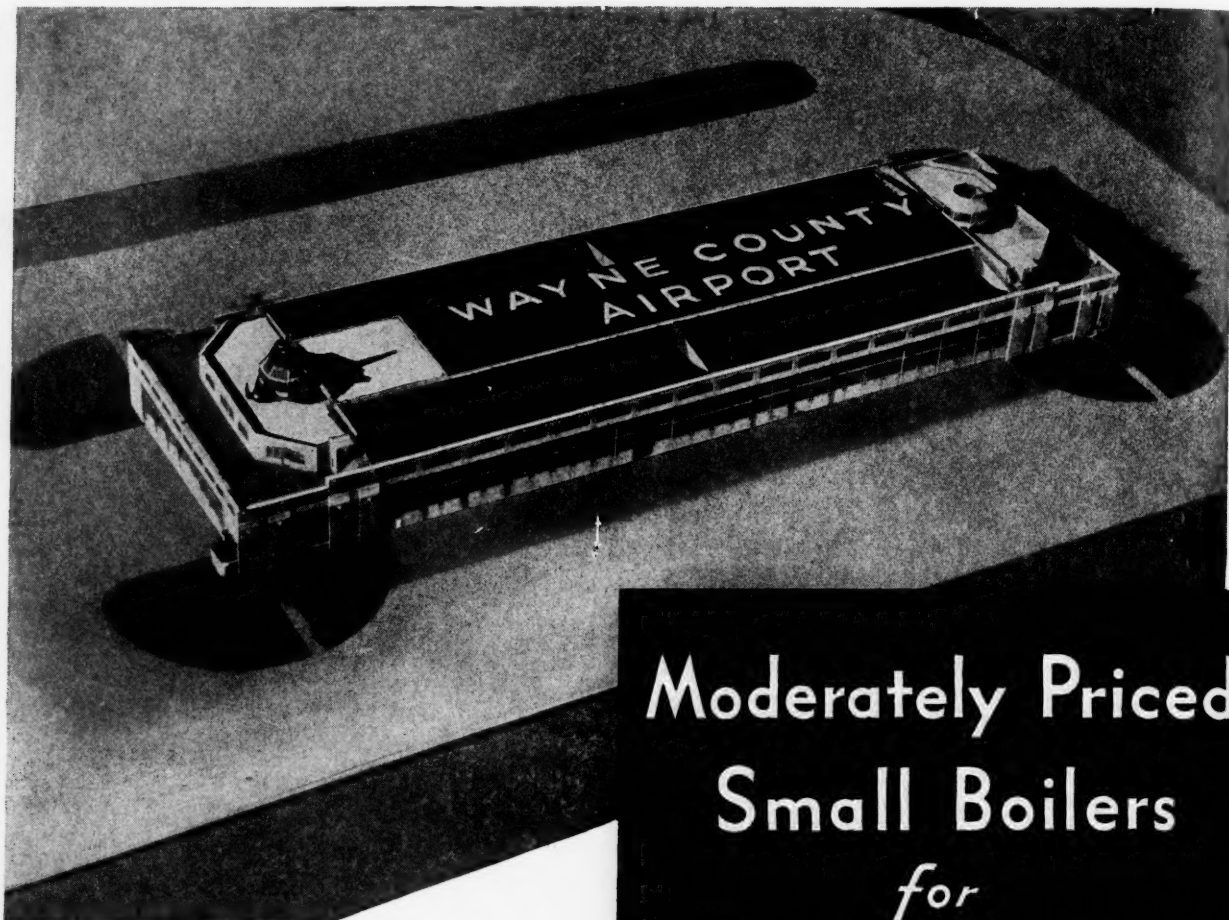
Legislation affecting the right of courts to issue injunctions in labor disputes has been passed by Congress and, as this is written, it is reported the anti-injunction bill is on its way to the President for approval or rejection. Several bills so far in this session have aimed at direct restriction of court power to issue injunctions, and union labor has been fighting for such a law for many years. Safeguarding the right to carry on business and the right of workers to continue employment without interference by violence, threats of violence or other forms of intimidation, are as essential as protecting the right of labor to organize, the right to strike peaceably and the right to appeal to the public for moral support.

The Tennessee Manufacturers Association stresses the fact that the anti-injunction bills pending would place industry at the mercy of labor unions in the event of strikes or uprisings of any kind. It is socialistic legislation. Under present laws, if a man's property is in jeopardy he can secure an injunction and restrain destruction or violence until the matter can be adjusted by the courts. The measure now being advocated to prevent injunctions, the Association rightly asserts, means that those who would destroy can continue their destructive efforts while the slow process of court action is being taken. Industry, loyal employees, interested stockholders and the public would be made subservient to an organized group. Organized revolt that tends to violate the right of private ownership and management, operating within the limitations of the Constitution, should come under the ban of a Federal Court injunction as the only lawful immediate step to serve the best interest of the public which is always the innocent victim of a prolonged strike.

Elsewhere in this issue James A. Emery presents definite reasons why this dangerous measure should be defeated. In a letter accompanying his article he says:

"In my opinion, no more serious issue has been presented to a President in our time. If this measure is enacted and accepted, the Federal Courts will become a subordinate and not a coordinate department of the Government."

As the time for presenting objections is getting short, it is suggested that the President be informed of the views of business America on this important matter.



## Moderately Priced Small Boilers *for* Steam Heating

The selection of two Babcock & Wilcox Type H Stirling Boilers at Wayne County Airport insures the same economical and thoroughly dependable operation that is typical of hundreds of successful installations in which this efficient, moderately-priced boiler is supplying steam for heating, power, or process work.

The Type H Stirling Boiler was chosen for this modern airport as this unit is compact and requires but little headroom. Other outstanding advantages include a small investment, adaptability to any kind of fuel and every method of firing, and the ability to produce dry steam over an extremely wide range of pressures and capacities. The success of this unit is evidenced by installations totaling over a million square feet of heating surface.

The design and construction of this boiler reflect the experience of an alert and progressive organization dating back to 1881. The economy and operating satisfaction of owning a boiler manufactured by Babcock & Wilcox can be realized by every operator requiring a moderately-priced boiler of even the smallest size. Write for further details.

Typical installations and details of construction of the Type H Stirling Boiler are included in a new thirty two page publication which will be sent upon request. Simply ask for Bulletin G-8.



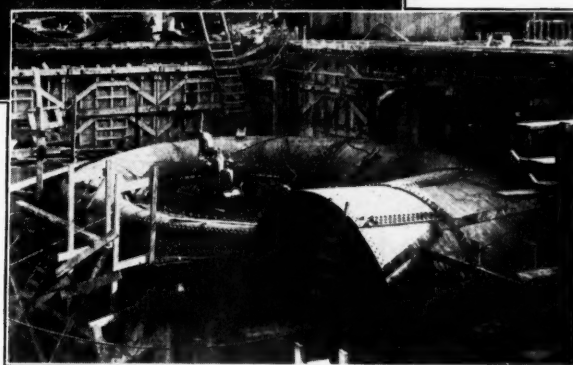
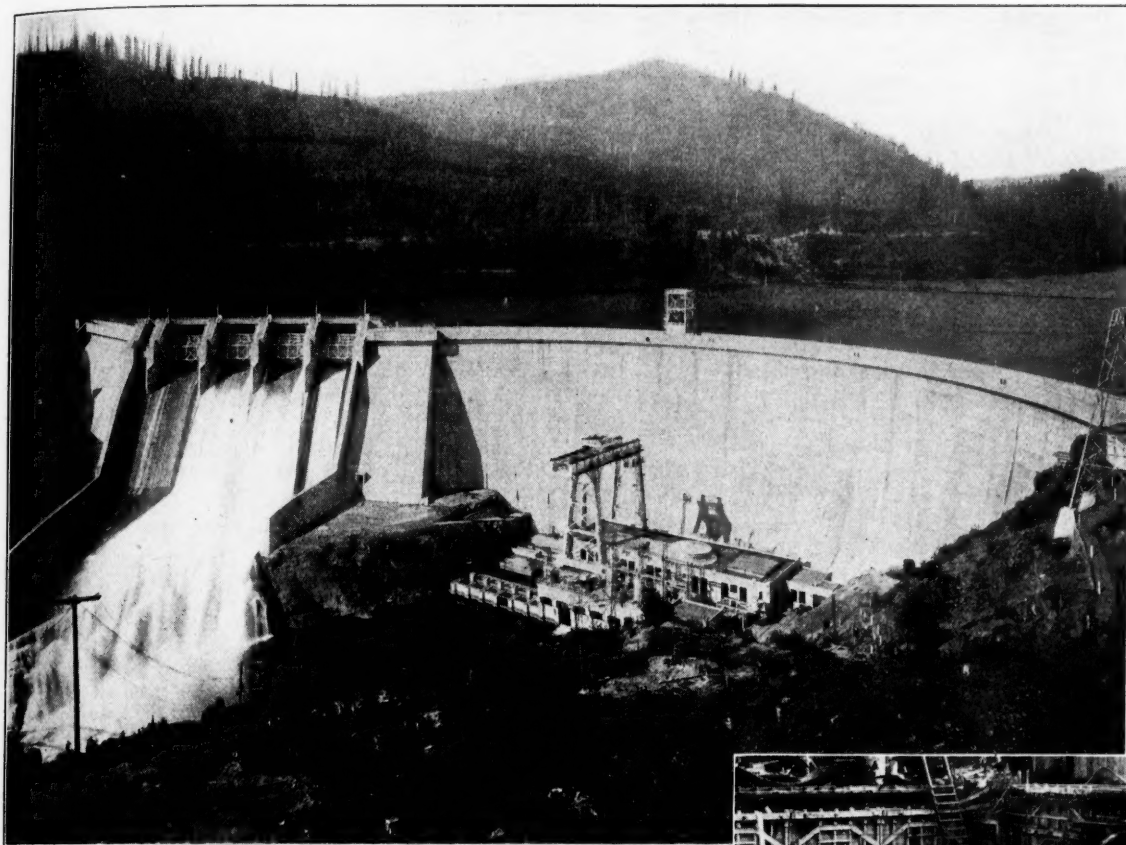
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COMPANY**

85 LIBERTY ST. NEW YORK, N. Y.

Entered as second-class matter at the Postoffice, Baltimore, Md., under the act of March 3, 1879. Vol. CI, No. 12, weekly.

G-13





## 55,000 h. p. SMITH TURBINE

Installed at Ariel Development of Inland Power & Light Company

The largest Smith turbine unit to go into service recently is at the Ariel Station of the Inland Power & Light Company on the Lewis River in Washington. The initial 55,000 h.p. unit consists of a single runner vertical turbine operating at 120 r.p.m. under 170 feet head, set in a 14'-6" inlet diameter plate steel spiral casing and discharging through an elbow type draft tube. Power from this development, the ultimate capacity of which will be 220,000 h.p., is delivered to the Northwestern Electric Company, Portland, and other inter-connected systems.

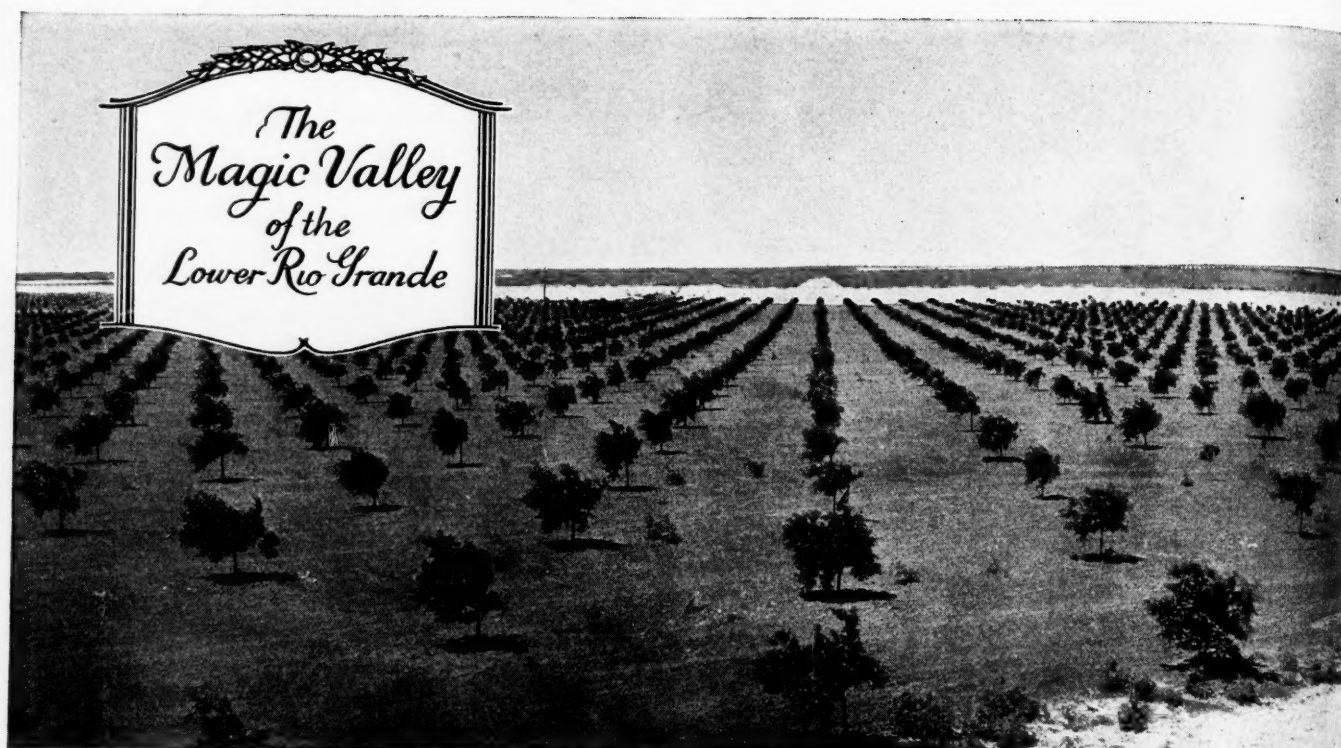
Smith turbines now in use or under construction at many of the major hydro-electric developments in the world already total over 7 million horsepower; and the Smith Plant is the largest devoted exclusively to hydraulic turbine manufacture. WRITE FOR CATALOGS.

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Courtesy Missouri Pacific Line

# Millions of Citrus Trees Protected by the Right Motor and the Right Control

**F**IFTEEN years ago, the Lower Rio Grande Valley was a semiwilderness of mesquite and cactus sparsely inhabited by ranchers and Mexican goat herders.

To-day, it is one of the garden spots of the world, with an ever-increasing population—now in excess of 200,000—attracted by the extremely fertile alluvial deposit.

Water—simply water—has wrought this miracle. Water pumped from the Rio Grande River and distributed through 2500 miles of canals to 520,000 acres of land sustaining millions of citrus trees and large plantings of cotton and vegetables.

In 1925, General Electric sales engineers were called into the Valley by the Central Power & Light Company to aid in the electrification of the vast irrigation system.

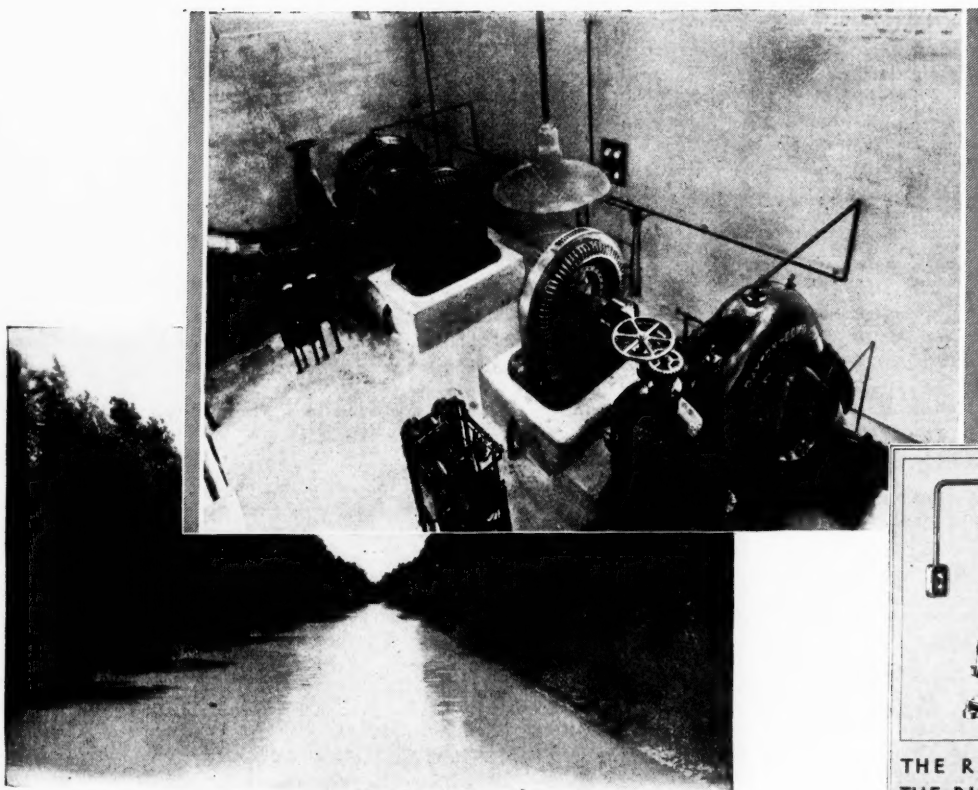
After a complete investigation, G-E salesmen, because of their thorough engineering training, were able to recommend the right motor and the right control for the initial installation. So successful was this application, that electricity, harnessed by G-E motors, went right up the Valley, changing over pump after pump from other types of drive to electric drive until to-day there is installed over 18,000 hp. in G-E motors, all served by the Central Power and Light Company.



# You may not be a fruit grower but you, too, can profit by the Right Motor and the Right Control

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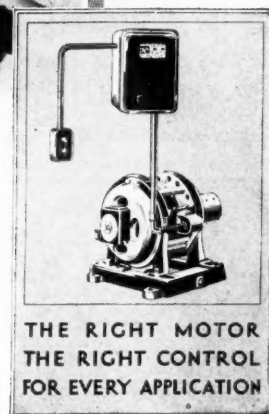
and control applications; because General Electric stands squarely back of its customers with conveniently located stocks and service shops; because General Electric maintains, primarily on a *service* basis, a complete renewal-part service to safeguard the customer. These and many other values are back of the widely prevailing expression, "I like to do business with the General Electric Company."



*Two G-E 250-hp. synchronous motors, with the right G-E control, driving centrifugal pumps in the Donna River Pumping Plant, Donna, Texas*



*Typical irrigation canal in the lower Rio Grande Valley*



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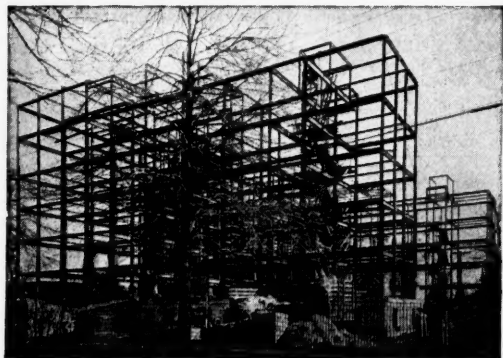
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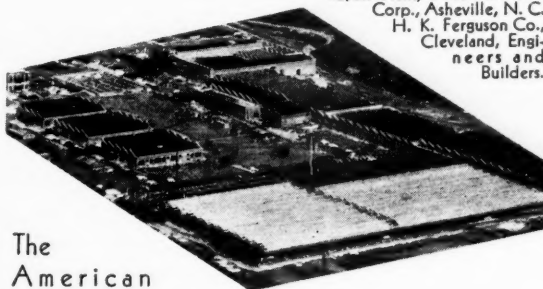
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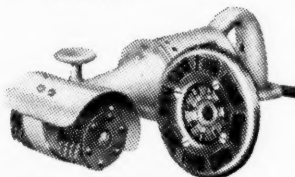
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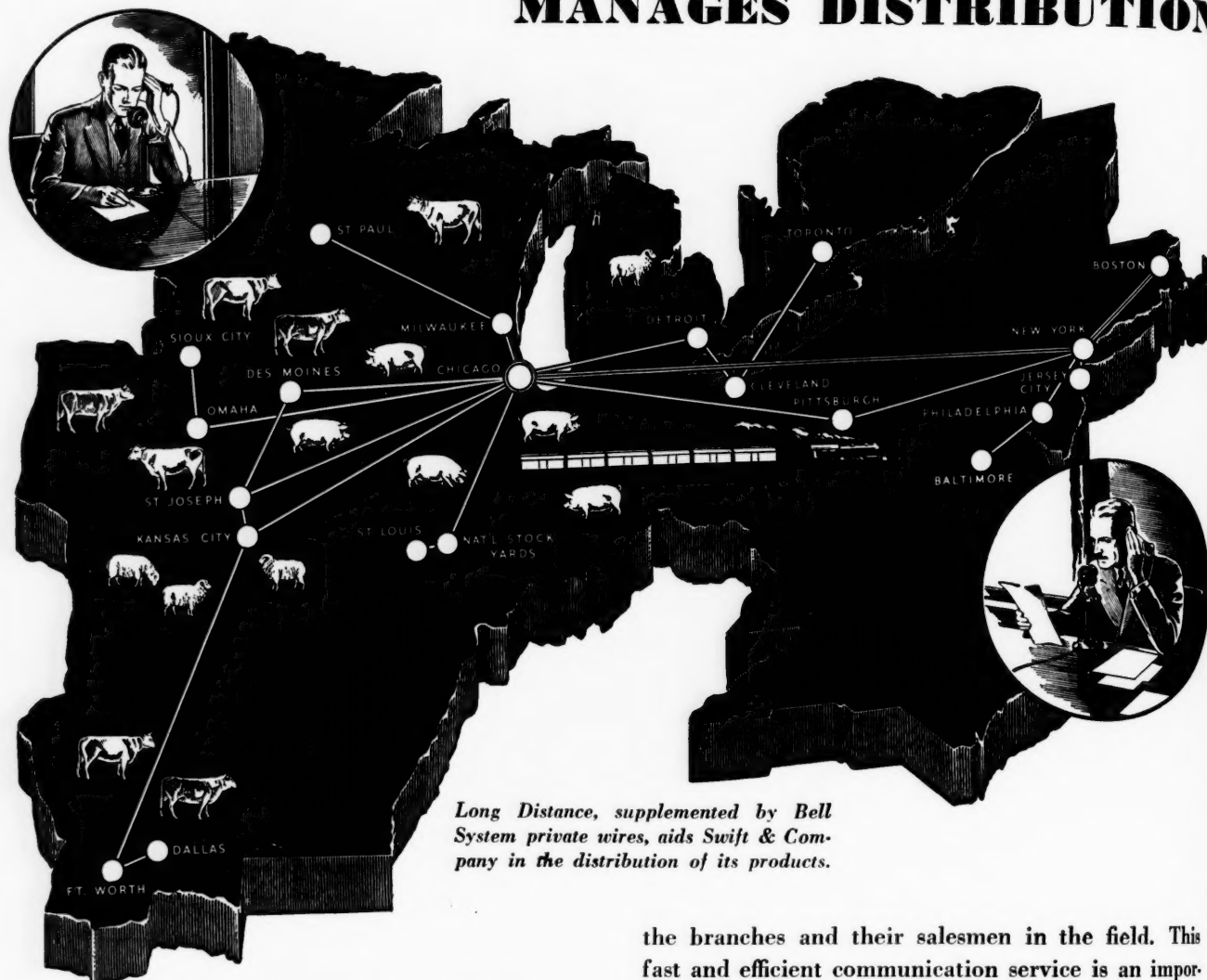
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TELEPHONE BUSINESS OFFICE



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Baltimore, Md., March 24, 1932

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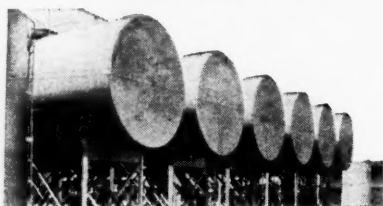
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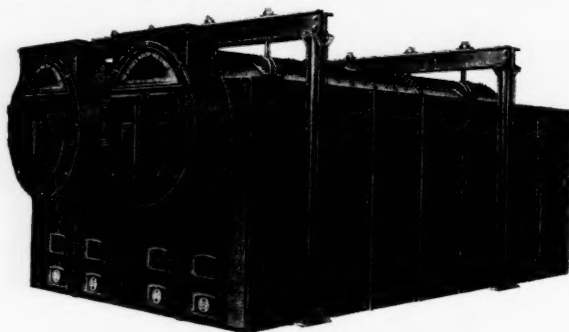
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# Manufacturers Record

Reg. U. S. Pat. Office

Devoted to the Upbuilding of the Nation Through the Development  
of the South and Southwest as the Nation's Greatest Material Asset

Vol. CI No. 12 }  
Weekly }

BALTIMORE, MARCH 24, 1932

{ Single Copies, 20 Cents.  
{ \$6.50 a Year

## Possible to Save \$700,000,000 in Government Expense

IT is necessary to have a balanced budget in any business that is run on a sound basis, and in accomplishing this it is as important to reduce unnecessary expenses as it is to increase revenue. That fact should be impressed upon Congress and those elected to leadership who have resisted suggestions for at least one obviously necessary economy measure. That is the repeated suggestion from all parts of the country to reduce high governmental payrolls to a point more nearly in line with present day conditions.

Government officials, both state and national, in their studied efforts to meet deficits by increased taxes alone, are not giving enough heed to the insistent demands of taxpayers that salaries be reduced. The MANUFACTURERS RECORD is in agreement with the general conviction that a Federal sales tax at the moment is necessary, for the credit of the national government must be maintained through a balanced budget. But this should be of temporary duration and should not displace earnest consideration by Congress and governmental officials throughout the country of a very evident way by which taxes, governmental and local, can be reduced and millions saved. The welfare of the country is being seriously hampered by increasing taxation that is verging almost to the point of confiscation. It is time for the business men and taxpayers of the country to demand a sounder business readjustment in public administration.

There are approximately 4,500,000 employees of Federal, state and local governments. They receive in the aggregate at least \$8,000,000,000 annually, which is more than half the \$14,000,000,000 expended by the

Federal government and local governmental units. Since 1913, all governmental expenditures have increased 380 per cent, while the national income, now about \$50,000,000,000, is only 60 per cent above the 1913 level.

One person in eight, gainfully employed, is on the public payroll. In 1913 it was one in twenty. A few years ago the proportion was one out of eleven. It takes seven private workers today to support one public worker in this land. Therein lies the increasing burden of the situation. By this, it is fair to assume, is explained at least part of the difficulty in making salary and wage reductions in governmental jobs. Those employed throughout the nation poll more than 4,000,000 votes.

About 17 per cent of Federal employees receive \$1000 or less per year. On this basis, and allowing for lower salaries paid by local governments, probably 1,000,000 of the 4,500,000 workers on the public payrolls of the country receive \$20 a week or less. This leaves 3,500,000 public employees receiving more than \$7,000,000,000 a year, figuring it on a low average salary of \$2000. By reducing the scale of pay 10 per cent for each one receiving over \$1000, there would be saved to the taxpayers of the nation \$700,000,000 in one year, which is about \$2,000,000 a day. Of the total amount, as much as \$125,000,000 would be saved by reducing by 10 per cent the salaries of Federal government employees. This is equal to nearly one-quarter of the total likely to be derived from the manufacturers sales tax.

In the Post Office Department, out of \$803,000,000 expended, Postmaster General Brown stated before



the House Economy Committee that \$566,000,000 is for salaries and wages. He explained that few economies are possible in operating costs unless Congress wishes to change the salary scale. He admitted the Postal Service is overmanned, due to the large decline in the volume of mail handled. It must be apparent that practically all branches of the government are now over-manned, with the nation's general business 40 per cent below previous activity. It is more logical and humane to reduce salaries than to resort to wholesale dismissals.

The fee system in local governments should be abolished and a straight salary basis adopted instead. Some progress has been made in this direction, as well as in consolidations of local government units which has reduced operating costs.

It is unquestionably a sound business suggestion to reduce expenses of government when every conceivable effort toward economy is being made by private business. It demands attention at a time when private business faces a prospect of reduced volume of revenue and rising taxes.

Government in all its branches is dependent on the prosperity of private business, and the need for economy on the part of all governmental units cannot be stressed too strongly. Probably 90 per cent of salary and wage scales in private business have been reduced. Organized labor has accepted reduced rates, but with a few exceptions of some municipal and county employees, salaries of public officials and workers in all branches of government, national and state have not been reduced during the depression. The income of these individuals has increased in purchasing power by at least 20 per cent, due to the lower cost of living. In many commodities their salary dollar today will buy from 50 to 100 per cent more than it bought in 1927-1929, and it is worth remembering that the Federal Income Tax exempts "compensation paid by a State or political subdivision thereof to its officers or employees for services rendered in connection with the exercise of an essential governmental function."

More than \$38,000,000 a day, including Sundays and holidays, is now required to support the various governmental units of this country. This sum represents more than 25 per cent of the present curtailed income of the American people. Although taxes in 1913 represented about 6½ cents of every dollar of national income, following the war at a high peak of governmental expenses it was slightly less than 17 cents out of every dollar of income. With the higher taxes in sight for 1933, it is estimated that probably 30 cents out of every dollar will be required for taxes to run Federal, state and local governments. The drain is too heavy for even the richest nation of the world to bear for any length of time. All governmental expenditures not absolutely necessary and of a productive nature should be curtailed in the light of present conditions. If voters will make themselves heard definitely and positively in Congress and in states and cities, it will be forced upon the consciousness of our public officials that, irrespective of votes and irrespective of anything else, here is a measure of economy that is necessary and wise. There can be no sound argument on the other side.

## New Uses for Cotton

THE constructive work of the cotton-textile industry in broadening the market for cotton affords a lesson to other industries. Not only new and improved materials and new ways of using cotton have been developed, but the industry has realized more than ever the essential importance of bringing its products to public attention. In wearing apparel, attractive designs and styling have increased the popularity of cotton goods. Sales campaigns have been launched, embracing the closer cooperation of merchants and bringing about a wider distribution of cotton fabrics. Last year during National Cotton Week more than 14,000 retail stores participated in the campaign. Plans are now being made for greater activity in this year's campaign which will cover the week beginning May 16.

New uses of cotton in industry have been fostered. The Bureau of Agricultural Economics reports the development of a suitable cotton fabric for curing concrete, which has been tested in road construction and found to be fully satisfactory. The use of this cotton fabric results in a 50 per cent saving in cost of covers, due to its longer life. Results of a survey were also cited to show that approximately 50,000 bales of cotton were in use in the United States in 1929 in the form of cotton-picking sacks, cotton-picking sheets, and tarpaulins, and that 33,000 additional bales would have been required had all the sheets and sacks in use been made of cotton. Increased use of consumer cotton bags in the retail packaging of potatoes, nuts, citrus fruits, onions, and apples was reported. Barrel-top covers of cotton, cotton roofing, and cotton binders for bituminous roads are among other uses for cotton which offer a wider market for the industry.

Continued research in the development of mildew proof and flameproof fabrics was reported by the Bureau of Chemistry and Soils.

The Bureau of Foreign and Domestic Commerce has been active in stimulating purchases of cotton goods and products in recent months. Technological research in cotton yarns and cloth has been undertaken by the Bureau of Standards. This includes the effect of twist on yarns, cotton insulating materials for partitions and in refrigerators, and the effects of quartz mercury lighting on clothing in laundries.

Continued technical progress was reported in the development of a low priced fabric for use as a cotton bale cover, but the prevailing practice of selling cotton on gross weights instead of net weight has been an obstacle to the more extensive use of cotton bagging. To meet the situation, several cotton mills in the South agreed to offer a premium for all cotton baled with cotton bagging. It is estimated that about 200,000 bales of cotton and cotton waste would be required yearly to wrap the American cotton crop in cotton fabric. Therefore, the American cotton grower has it in his power to greatly increase the consumption of cotton by substituting, at the time of ginning, cotton bagging for foreign jute bagging.

# The South Is at Work

**E**XPERIMENTS under way to produce news print and finer grades of white paper from the South's abundant pine resources, are of far reaching importance. The possibilities that are opening up for a greater utilization of Southern woods is an exceedingly live subject, which is focusing the attention of scientific investigators, manufacturers and investors upon a development that may not only widen the scope of paper making in this country, but inaugurate an industrial expansion that may stimulate general activity.

If the research now under way on a semi-commercial scale substantiates successful laboratory tests, the pulp and paper industry will be revolutionized. It will place this country on a self-sustaining basis for future pulp wood requirements, making available a supply equal to 20 times our present domestic pulp wood consumption.

In the last decade, great strides have been made in the manufacture of building board and kraft paper from Southern pine. In fact, the South dominates the kraft industry of the United States. The pulp making capacity of the South is now more than 1,000,000 tons a year. The magnitude of the development can be better appreciated when consideration is taken of the fact that in 1900, with no production in the South, the entire country produced less than 1,500,000 tons of wood pulp annually. With kraft box board and wall board manufacturing firmly established in the South, the next logical step is to seek to diversify its wood using pulp and paper industries. It is in the development and further diversification of Southern forest products in the manufacture of news print and white papers that the greatest interest is being centered at the present time.

In the MANUFACTURERS RECORD of March 3 an illustrated article was published showing that remarkable progress has been made in recent years in utilizing wood waste and that this has brought into existence many new industries in the South and further developments are under way. Last week in these columns an account was given of the experimental pulp and paper plant being established at Savannah to determine the commercial possibilities of making news print and white papers from Southern pine. In this issue appears the first of two articles on pulps and papers from Southern woods, including hardwoods and gums, which tell of the possibilities of the development and stress some of the needs of the industry. The concluding article is to appear in the March 31st issue.

Next to cotton, the timber resources of the South in its existing forests, and particularly in the rapid growth of its pine trees because of climatic conditions, are one of its greatest assets. It is estimated that under proper protection from fire and managed

for continuous growth, the forest lands of the South could provide most of the future wood requirements of the country; and, as stated, its pine pulp wood supply is 20 times our present domestic pulp wood consumption. More than 190,000,000 acres have been classed as actual or potential forest land in the Southern states. In 1920 there were more than 114,000,000 acres of pine land, containing 139,000,000,000 feet of virgin timber and 119,000,000,000 feet of second growth timber. In 1926, the latest available survey shows the South had approximately 220,000,000,000 feet of Southern pine standing timber of commercial use. Of course, with the use of Southern pine for pulp purposes there would become available a larger part of the wood resources of the South, since this would include small timber not suitable for lumber.

Long a dominant lumber-producing region and now supplying about 45 per cent of the lumber cut of the United States, further use of Southern woods is being developed. Plants for the greater utilization of forest products now in prospect will add enormously to industrial development. Because of the South's abundant hard and soft woods, it early became a furniture manufacturing center, and other woodworking industries have been in successful operation for many years.

The South annually produces in excess of \$1,177,000,000 of manufactured products directly or indirectly from its forests. The estimated annual production of Southern lumber, woodworking and allied industries in a normal year, has been as follows:

*Estimated Annual Production of Southern Lumber, Woodworking and Allied Industries*

Item	Amount
Boxes, wood	\$42,000,000
Boxes, paper	34,000,000
Brushes	4,000,000
Baskets	6,000,000
Cooperage	17,000,000
Excelsior	500,000
Furniture	147,000,000
Lumber and timber products	555,000,000
Frames, wooden	900,000
Paper	52,000,000
Paper goods	2,400,000
Planing mill products	164,000,000
Pulp wood	22,000,000
Turpentine and rosin	39,000,000
Wood distillation	4,800,000
Wood preserving	76,000,000
Wood turned and shaped	10,400,000
Wooden goods not specified	300,000
<b>Total specified uses</b>	<b>\$1,177,300,000</b>

While the foregoing lists some of the major woodworking and wood consuming industries of the South, it does not cover the aggregate valuation of output from Southern forests, as it takes no account of the hard and soft wood products that are manufactured elsewhere, nor the value of wood consumed for fuel.

Nevertheless, the progress thus far made shows that the South is the center of the woodworking industry of the United States, and with a further expansion in pulp and paper making, the manufacture of prod-



ucts from Southern forests will be widely diversified. The expansion of this paper and pulp industry could not be undertaken at a more opportune time to be of the greatest benefit to the entire country in creating activity and employment.

Along with this development, the South's increase in cotton manufacturing, hosiery making, boot and shoe manufacturing, rayon, cellophane, aluminum plate and sheet metal for heavy construction, a plant for which has recently been opened and the first of its kind established in the country, iron and steel production, furniture making and food processing, is setting a pace for the nation in the revival of industrial activity.

The South is at work.

## Tax on Butter Substitutes

**A**NOTHER attempt to saddle a discriminatory tax on oleomargarine in a Southern state was thwarted by the Virginia General Assembly when the Senate tabled the bill calling for a tax of 5 cents a pound on this product. Periodically, efforts have been made to tax butter substitutes, particularly in the Western dairy states.

The cotton growing South has a definite interest in all such attempts to place a discriminatory tax on vegetable fat products. Refined cottonseed oil is a pure vegetable fat. The cottonseed oil industry is an important by-product of the South's cotton crop. The annual value of this oil at present reduced prices is about \$100,000,000 and the total value of the output of the cottonseed oil industry is approximately \$200,000,000.

All efforts to tax vegetable oils and fats are based on the mistaken assumption that it will protect the butter industry. To tax the cheap vegetable shortening is to place an unwarranted premium on butter substitutes. The burden would bear most heavily on the poor who are compelled to consider cost in buying. Vegetable fats contain high nutritional qualities and have a valuable place in the nation's food supply.

## America's Shame

**C**RIME is as old as civilization. The stealing of children is nothing new. But the most startling of all the amazing reports being published about the kidnapping of the Lindbergh baby is the recognition of a Government of Gangdom. To appeal to reputed representatives of organized crime to come to the assistance of law-abiding citizens and their law enforcement officers is incredible. No wonder that an English newspaper, referring to the abduction, should say editorially:

"If the cruel and miserable method of intimidation, with a helpless child as its victim, is really the work of

racketeers, and if the outcome of it is not a genuine and determined effort to end the whole deplorable business in all its ramifications, then the rot must be sunk very deeply into American life."

What an indictment of America, and the striking fact is it is alarmingly near the truth.

If this heinous crime which has stirred the world can be made to awaken decent law-abiding citizens to their responsibility and duty to clean up the outrageous condition of lawlessness existing in this country, it will prove a vital turning point in American progress and well-being.

The present situation is chargeable to the indifference of the American people. Each of us is guilty of this indifference to a degree. It is the direct result of a steady deterioration in our law enforcement and punishment machinery which in too many places and too many instances apparently is under control of underworld leaders, crooked politicians and lawyers, intimidated court officials and grafting police. The only cure is to clean them out. The task is not hopeless, there are still enough honest men left on which to build a police and punishing power worthy of trust.

The situation is not one to be dreamed about, nor regarded complacently. There is being presented every day a definite threat to the safety of society and the maintenance of American institutions.

## South Economically Sound

**CLINTON B. ALLSOPP**, vice-president of the Postal Telegraph Cable Company, New York, returned a few days ago from a 3000 mile business trip through the Southeast. In response to a request from the MANUFACTURERS RECORD for his opinion of the business situation and the outlook, he said:

"On my journey I stopped at such cities as Jacksonville, St. Augustine, Brunswick, Savannah, Macon, Atlanta, Greenville, Pinehurst, Charlotte, Asheville, Winston-Salem and Roanoke.

"Building projects, under way or planned, are impressive. Highways are vastly improved, and all along my route I noticed additional road construction progressing. This augurs well for the future.

"It would be ridiculous to convey the impression that there are no dark spots in the South. There are. I talked to business and banking executives who were not brimming over with optimism. On the other hand, they were not pronouncedly pessimistic as compared with other parts of the country.

"The South is definitely demonstrating ability to master depression and is one of the soundest sections economically in the country."

The foregoing concise statement of fact as to the situation in the Southeast by the executive of a great organization in intimate touch with business sentiment throughout the country needs no further comment other than that it should be dinned into the consciousness of the timid to restore their confidence. Would that others too close to pessimism-radiating centers could go out and mingle with those in other sections of the country who are answering the prophecies of gloom with constructive deeds.



# The Norris-LaGuardia Anti-Injunction Bill

By  
**JAMES A. EMERY**  
General Counsel,  
National Association of Manufacturers,  
Washington

THE Norris-LaGuardia Anti-Injunction bill, S. 935 and H. R. 5315, is in conference between the Houses, with every likelihood that it will be sent to the President within a short time.

Were we not distracted by the economic situation, the country would realize that it is presented with a revolutionary attack upon substantive law and procedure. Among the things which this measure will do, if valid, are these:

1. It outlaws any agreement by which employer or employee agrees VOLUNTARILY not to become or remain a member of any labor or employers' organization, irrespective of its character or purpose. That is, no Federal court can enforce or protect such a contract.

2. It takes nine groups of acts, which include most of those that accompany labor disputes, and prohibits any Federal court from enjoining them when done individually or collectively, irrespective of the purpose or intent of the parties. That is, the bill does not undertake to say that such acts, when done for an unlawful or criminal purpose, become legal or right, but it does say they shall not be restrained. Yet, whether you are a layman or a lawyer, you know that the rightfulness or wrongfulness of any act, no matter how innocent it may be in itself, depends upon the purpose of the doer.

Such a theory is a revolution in morals as well as law.

3. The bill provides a different rule of liability for officers, members or agents of a labor combination, when acting in a labor dispute, from the rule of liability which governs everybody else who employs an agent. That is, outside of a labor dispute, people, individually or collectively, are responsible for the acts of their agents within the general scope of their employment. In a labor dispute, they are only to be responsible when they know what the agent is doing and authorize him to do it. That is, the less they know about what is doing in their interest, the less will be their liability.

4. The procedure to get an injunction

under the limited authority that would thus be left to the courts is made as difficult as possible. So that if a labor combination chooses to launch an attack, it has all the advantage of surprise, while its victims will be confronted with every obstacle in procuring the protection of a court, although they may be threatened with demonstrable irreparable injury, and no remedy at law. Yet this condition will apply only to labor disputes, while, in any other kind of a dispute, acts of the same kind when committed by persons other than those engaged in a labor dispute will remain enjoinable. Thus, a code of special privileges is created and a special license issued to those who engage in such disputes.

5. One section of the bill (Section 11), authorizes a jury trial in cases growing out of labor disputes. It has always been recognized that every court has the inherent authority, as a part of the judicial power, to enforce its own orders. The Supreme Court recognized the right of Congress to regulate the exercise of this power to the extent of permitting trial by jury where the facts constituting an alleged contempt were also a crime under the law of the State where committed, but the court said this went to the verge of Congressional authority. This bill proposes that any contempt in a labor case may be subjected to the right of trial by jury, although the same kind of a contempt could not be tried by a jury in any other case. This is clearly an arbitrary classification intended to make it more difficult for the court to enforce its authority and protect the victim of a violated order. This procedure is confined to labor cases to save the enforcement of "padlock" injunctions issued under the

Volstead Act. The hypocrisy of those who thunder about "government by injunction" becomes evident when we notice that Professor Frankfurter, an ardent proponent of this legislation, discovers about 118 injunctions issued in labor disputes by Federal courts in 27 years, while the Department of Justice reports 42,290 injunctions issued in liquor cases in substantially seven years and now in force.

The whole effect of the legislation is to undertake to prevent Federal courts from providing effective protection against powerful combinations threatening irreparable damage in labor disputes, whether those who seek the remedy are private individuals undertaking to protect their rights or that of their workmen, or the United States appearing in its own courts to protect the public against combinations undertaking "to starve the nation into submission," as Justice Taft said in the Debs' case, or threatening, by concert, to deprive the nation of fuel, as President Wilson alleged in a threatened miners' strike in 1919.

Men are not equal before the law if some may do that which remains illegal and criminal when done by others. They are not less unequal if some may not be restrained from doing that which, under like circumstances, would be restrained in the private or public interest.

The bill, if valid, would reduce courts to mere boards of arbitration, subordinate the judicial to the legislative branch, and transfer from judicial bodies to irresponsible voluntary combinations the right to issue effective injunctions prescribing the conditions under which business should be conducted and workmen should earn their living.

The bill is so plainly unconstitutional on its face and so unsound in its policy that it seems impossible to believe that it may be given the approval of the President.

"Industrial liberty," said the present Justice Brandeis, in his book "Business—A Profession,"

"like civil liberty, must rest upon the

solid foundation of law. Disregard the law in either, however good your motives, and you have anarchy. The plea of trade unions for immunity, be it from injunction or from liability for damages, is as fallacious as the plea of the lynchers. If lawless methods are pursued by trade unions, whether it be by violence, by intimidation, or by the more peaceful infringement of legal rights, that lawlessness must be put down at once and at any cost."

### Urges Veto of Anti-Injunction Bill

The Associated Employers of Indianapolis urges that President Hoover veto the Norris-LaGuardia anti-injunction bill, because of the destructive result it would have on the equity system of the Federal Courts. If the United States Government sets such a precedent, then the State Legislatures and courts would likely follow the same procedure, warns the association. Further:

"If the Norris-LaGuardia bill becomes a law, with President Hoover's signature, it will not only render the securing in the Federal Courts of an injunction in labor disputes practically impossible, but it will deny to the Government the right to protect citizens' lives and property which may be in jeopardy. The effect of such a law would be to permit the coercion of employers by labor combinations directed against non-member workers, and to encourage the demoralizing and dangerous results of 'collusion' between organized labor and combinations of employers under 'racket' agreements."

### American Gas Association Distribution Conference

The ninth annual Distribution Conference of the American Gas Association will be held on April 6-8, in Birmingham, at the Tutwiler Hotel, a special feature of the gathering to be a visit of inspection to plants of the local pipe manufacturers, where an opportunity will be afforded the delegates to view the manufacture of pit cast, DeLavaud, McWane, and Monocast pipe. This has been arranged for the second day of the meeting.

The program committee chairman is F. A. Lydecker, of the Public Service Electric and Gas Co., Newark, and subjects and papers for discussion and report include the following: "Giving Good Distribution Service to Customers," "Domestic Appliance Maintenance Service," "Pipe Joint Research at A.G.A. Laboratory," "Welded Procedure for Arc Welded Pipe Joints," "New Developments for Oxy-Acetylene Welding of Steel Pipe," "Copper Pipe for Gas Distribution," "Pipe Coatings and Corrosion Research," "Determining Soil Corrosiveness," and other topics.

## Canning 25,000,000 Eggs

Plant Owned by Co-operative Buys From Farms in 19 Counties and Distributes to Southern Markets

Springfield, Mo.—With the recent installation of modern machinery, the Producers Produce Co. of Springfield, a co-operative unit of the Missouri Farmers Association, is equipped to break and "can" approximately 4,000,000 pounds of eggs a season, according to Manager A. L. Farnham. In the past five years, the company has canned 350,000 cases of eggs and this year will be equipped to break 60,000 to 75,000 cases.

Two new churns, manufactured by Frank B. Lomax of Chicago, are recent additions to the egg-breaking room equipment. After being broken, the eggs are poured into a vat at the side of the churn, and a centrifugal pump forces them through a fine monel metal strainer, passing into the churn, which is equipped with a small propeller.

This new machine strains the whites free of egg skins and shell and does not cause the whites to foam. Also, it strains whole eggs and is said to be the only machine to date in which whites can be successfully handled.

Electric-scale devices, which weigh eggs automatically in 30-pound tins, were added last year. The eggs come directly from churn into the tin, on the automatic scale device.

The Producers egg-breaking room has 14 "Nuway egg meat separators," each separator individually operated by one girl, who can break as high as 11,000 eggs daily.

The big schedule undertaken this season by the company means that 25,000,000 fresh Ozarks eggs will be broken and canned between now and August 1. A force of 50 girls started work March 1. This force can break as high as 28,000 pounds, or 800 cases, of eggs daily. One case has a net of 36 pounds, with 9 pounds of shell.

Practically all eggs to be canned are already contracted for and will go mostly to Atlanta, Fort Worth, Dallas, New Orleans, to cities in Florida and other Southern markets.

Every egg broken and canned must first go through the candling room, then to the egg-breaking room. In addition to the candling process, no chances are taken and each egg must be "smelled" by the girl who breaks it to make certain of its freshness. An egg will absorb bad flavors, the same as milk or other

food commodities. One onion-flavored egg would spoil an entire 30-pound pall of canned eggs. Extreme care is taken also that no "musty" eggs get into the pails.

Fresh eggs can be broken and canned and will retain their freshness indefinitely, and when thawed out are exactly the same as when canned, it is said.

There are four processes. In the first and most common, eggs are broken "straight," with both whites and yolks mixed and canned together. In the second and third, the whites and yolks are separated and canned separately, as straight whites or straight yolks. In the fourth the yolks are mixed with a sugar solution and canned as "sugar yolks."

As soon as eggs are properly mixed in the churn, they are put in 30-pound tins and placed in a room where the temperature is kept at 10 degrees below zero. It is important to freeze the canned eggs as quickly as possible after they come out of the shell. Seventy-two hours are required to freeze eggs solid. They are then stored and shipped as desired.

Canned eggs are widely used by bakers, mayonnaise companies, delicatessen shops, candy companies and other large consumers.

Eggs to be canned by the Producers company are collected daily from 76 different Farmers Exchanges and 35 contracted merchants in 19 Southwestern Missouri counties surrounding Springfield.

The Producers Produce Company serves as a centralizing plant for these different units and all profits from the units are rebated at the end of each year to the individual farmer-producers on a basis of their volume of business with their respective M. F. A. unit. Last year the company declared a patronage dividend of nearly \$100,000 for its exchanges and merchants, who in turn passed this money along to the M. F. A. member-farmers doing business through them.

### Employment for 150

Franklin, N. C.—The plant here of the W. M. Ritter Lumber Company, idle since last July, has resumed operations, employing 150 men.

# \$6,000,000 Initial Water Power

## Development in Texas

THE Central Texas Hydro-Electric Co., Seguin, Texas, is proceeding with the development of hydro-electric projects on the Colorado River. During 1930, work was started on a hydro project known as the Hamilton Development, situated in Llano and Burnet counties, and involving a dam, storage reservoir and generating plant to have a capacity of 20,000 kilowatts. Initial installation comprises two vertical direct connected turbo-generators of 10,000 kilowatts each, the maximum operating head to be 125 feet. The dam will have a total length of 9000 feet, with maximum depth to river bed of 132 feet. A 2000-foot section of the dam across the main river valley will consist of 28 spans of 70-foot arches, and will be of the non-overflow type. Spillway sections will aggregate about 6000 feet in length, and will consist principally of 35-foot arches with apron slab on the down stream side. The remainder of the dam will be non-overflow gravity type.

The dam will contain approximately 150,000 cubic yards of concrete; 1860 tons of reinforcing steel; 170,000 barrels of cement. The reservoir formed will have a total capacity of 1,000,000 acre-feet, with a surface area when full of 20,000 acres. The capacity is estimated to be sufficient to store the entire annual flow of the stream in a normal year. Intake structures are designed to allow a draw down of 60 feet, although such drawn down will be unnecessary. It is said, except in a period of prolonged drouth.

Work on the dam proper began in May, 1931, and it is expected that the dam and power house will be finished and ready for operation some time in 1933. To date a total of 50,000 yards of concrete have been placed in the dam. Foundation work requiring unwatering has been completed across two-thirds of the river bed, and about 50 per cent of concreting in the main river section of the dam has been finished.

This project, estimated to involve an expenditure of \$6,000,000, is the first of a series of dams contemplated by the company on the Colorado River in Texas. The project is owned and will

be operated by the Central Texas Hydro-Electric Company. Engineers in charge of design and supervision of construction are the Fargo Engineering Com-

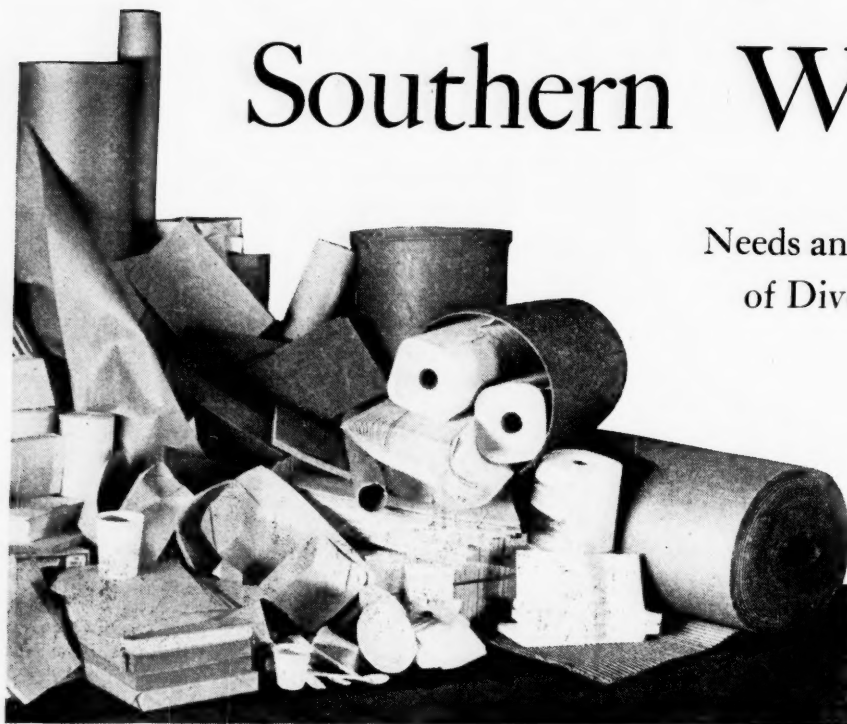
pany of Jackson, Mich. Contractors for the dam and power house substructure are the Fegles Construction Company, Minneapolis, Minn.



Construction Features of Hamilton Development Dam



# Pulps and Papers From Southern Woods



Needs and Possibilities  
of Diversification

By

C. P. WINSLOW,

Director,  
Forest Products Laboratory  
Branch of Research,  
U. S. Forest Service,  
Madison, Wis.

## Part I

**T**HE manufacture of wood pulp for the production of great quantities of paper, box board, building board and similar materials is one of the outstanding developments of forest industry in the southern United States in this century. With the opening in 1931 of another million-pound-a-day pulping project, in Florida, the pulp-making capacity of the South as a whole rose to more than 1,000,000 tons per year.

Two vital economic factors—cheap and abundant raw materials and a broad basic demand for the finished product—have combined to speed the growth of the Southern pulp industry during the last 15 years, with the emergence of the sulphate or kraft process as the most practical means during that period of pulping Southern pine. From Florida to Arkansas, new sulphate plants of 15,000, 45,000, even 150,000 tons annual capacity have been prominent features of trade news. This progress is remarkable when it is considered that the whole country in 1900 produced less than 1,500,000 tons of woodpulp annually.

### *Need of a Diversified Product*

Without seeking to minimize the significance of this striking development in Southern kraft production, there are those both inside and outside the industry who are wondering if a change in trend would not be a more encouraging

sign at this time. The question is whether the "one-crop" system, or "all the eggs in one basket," may not injure the future development of Southern pulp resources. While there are mills in the South turning out a variety of pulps, both light and dark, the vast expansion of sulphate pulping of the pines means that today nearly four-fifths of the total capacity of Southern mills is devoted to producing pulps of one main type, namely, unbleached sulphate or kraft.

Sulphate pulp is the product obtained by cooking a wood with an alkaline cooking liquor in which sodium sulphate supplies one of the active ingredients. Of the various pulping processes in gen-

eral use, the sulphate process is the most readily applicable to the pulping of woods rich in resin, such as pine. For all purposes considered in the text, it is sufficient to remember that sulphate pulp, unbleached, is a dark brown, tough, sometimes coarse product fully suited to the making of a large class of strong wrapping and bag papers and similar commodities. "Kraft," the German word for "strength," refers technically to a somewhat broader class of pulps, but in American usage "kraft" refers commonly to the unbleached sulphate product.

In 1930, out of a total United States production of 883,000 tons of unbleached sulphate pulp, the South furnished, at a conservative estimate, approximately 600,000 tons, and approximately one-third of the total consumption was supplied by imports. With improved economic conditions, the market for kraft may further expand. Also, continued improvements in manufacture may be able to overcome certain technical objections and thereby enable the domestic producer to garner profitably an increasing proportion of the entire consumption. Ordinary caution suggests the wisdom of diversification. Southern mills can best assure their profits and their stability in times of depression, not by unlimited reliance on brown kraft, but by producing the widest practicable variety of pulps and papers to meet the



Typical Specimen of Bleached  
Sulphate Pulp

Obtained at Forest Products Laboratory  
from Southern Yellow pine

diversified demands of the American markets. This holds true whether or not kraft board and liner consumption continues to enlarge indefinitely.

### American Pulps for American Markets

In seeking to develop an adequate and balanced program of pulp production for any section or region, the end in view is not to set up unlimited competition between regions for a limited market, but to secure, as far as possible, national independence from foreign supplies in meeting a vital and growing need of the country.

Light-colored or white products make up by far the greater part of our national paper requirements—book, magazine, writing and cheap print papers, light-colored wrapping, bond, mimeograph, greaseproof and other staples and specialties that, taken together, normally exceed kraft sulphate tonnage six or seven times over. Simply in the items of uncoated book, light-colored wrapping and writing papers, the total 1930 American consumption was more than three times that of kraft wrapping paper and, incidentally, more than twice the estimated annual capacity of all Southern mills. The possibility of the South entering this field is of great significance

### Sulphate or Kraft Papers

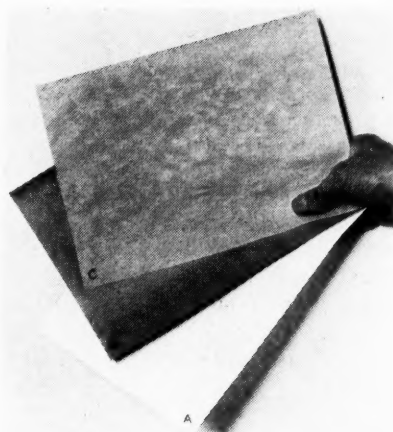
(A) bleached, (B) unbleached, (C) semi-bleached. High strength values are common to all three, but types (A) and (C) offer greater possibilities for diversified use than (B)

in paper producing circles. At the same time, we are importing nearly 1,000,000 tons of sulphite pulps annually to provide raw material for papers of this grade.

Can the South supply light-colored pulps at a price and quality to compete in these varied fields of consumption? If so, the horizon of the Southern industry is immensely broadened. For 80 years, the trend of American pulp and paper consumption has been progressive-

ly upward; but, imports either of pulpwood or woodpulp or finished paper have taken a larger and larger share of this expanding market. In 1918, 71 per cent of all the woodpulp used in this country was produced from domestic pulpwood; in 1930, the proportion had dropped to 44 per cent. To put this in terms of wood use, the 1930 paper and woodpulp consumption of the United States was equivalent to a consumption of 15,000,000 cords of pulpwood; of this quantity, the equivalent of nearly 8,500,000 cords was imported, 1,500,000 cords as raw wood and the balance in the form of pulp or finished paper. The South has more than 100,000,000 acres of cut-over pine land which, given proper forest management, is conservatively estimated as capable of producing from one-half to 1½ cords of wood per acre per year, a sufficient volume, in the aggregate, to match our present domestic pulpwood consumption 5, 10 or 20 times over.

The problem of domestic production, then, is not one of the shortage of wood as wood, but of developing processes for the production, from our abundant tree species, of the varied types and grades of pulp and paper that the modern United States market demands, and at costs which can compete profitably with foreign production. Woods growing



\$10,000,000 Plant of Southern Kraft Corporation at Panama City, Fla.

This mammoth plant is designed to produce 350 to 400 tons of paper daily. Operating 24 hours a day and averaging 30 days a month, and with each ton of paper valued at say \$80 a ton, it is capable of turning out each day an output valued at \$28,000 to \$32,000. When operating at capacity it will consume 375 cords of wood daily, which at \$4 a cord means that \$2300 will be paid out daily for this item alone. The amount of coal consumed daily is 5 cars, averaging 40 tons each, or a total of 200 tons. At its wharves, foreign vessels are able to dock with kalmat, ammonia, salt cake and a variety of raw materials, and to take away cargoes of finished paper. The Southern Kraft Corporation is now operating mills in the South with a daily capacity of about 1250 tons of kraft pulp for conversion into kraft papers, boards and bags, including two mills at Bastrop, La., and plants also at Camden, Ark., Mobile, Ala., and its Panama City mill.





**An Extreme Example of Rapid Growth**

An isolated loblolly pine "sapling," 8 inches across in 7 years

plentifully, the cheaper and little-used species, must be made a source of satisfactory pulps for large and diversified uses. To realize this objective, each region will have to produce the varieties of pulp that it is best fitted to produce by nature and by up-to-date technical and research developments.

#### **Possibilities of Diversification**

That there are opportunities for the operator who can diversify his products is no secret. For example, there seems little question that a mill which can produce a satisfactory bleached product from Southern pine sulphate pulp at a competitive price can command a good market. Also, there are possibilities for extending the species utilization in the South to certain hardwoods which are abundant and cheap. The problem is clearly one of research and technical development, and a great deal of excellent and intensive research has been undertaken by mills and research institutions. For example, the Forest Products Laboratory has devoted much attention to this problem of improving and diversifying the pulping of Southern woods, and some of its developments have been successfully incorporated in commercial practice. One of these is a distinct improvement in sulphite cooking; a second is the development of semi-chemical pulping processes. Other findings include methods for the preliminary impregnation of pulp chips to improve pulp quality and cheapen production, and the development of means of evaluating woods, pulps and papers, which are essential in properly appraising accomplishments.

#### **Bleached Kraft**

A development at the Forest Products Laboratory that ties in closely with present operations of the great kraft mills is the production of strong white pulps from longleaf, loblolly, slash and

probably shortleaf pines by a modified sulphate cooking process and special bleaching. Light-colored or white kraft is now being produced from this source with ease and regularity in laboratory demonstrations, and it has been worked up experimentally into a representative variety of papers, with particular success in the production of bond, writing and book papers.

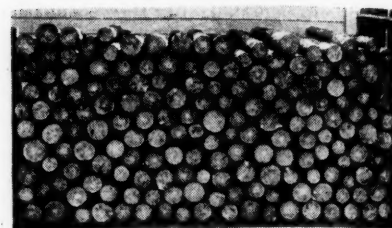
This means, briefly, that ordinary old-field or loblolly pine of the South, coming along so quickly after crop cultivation has stopped that it is often regarded as a kind of weed, has been turned into a potential white paper resource on hundreds of thousands of acres. For example, in a recent test simulating mill conditions as nearly as possible, a high yield of pulp was produced from an ordinary lot of loblolly pine, a typical old-field species. The logs came from second-growth stands in South Carolina.



**The Difference Between "Wild" and Well-Formed Papers, As Seen Against the Light**

In the "wild" sheet (left) the irregular, spotty formation is due to insufficient processing to shorten and prepare the fiber for uniform felting. Proper processing and correct operation of the paper machine give a well-formed sheet (right)

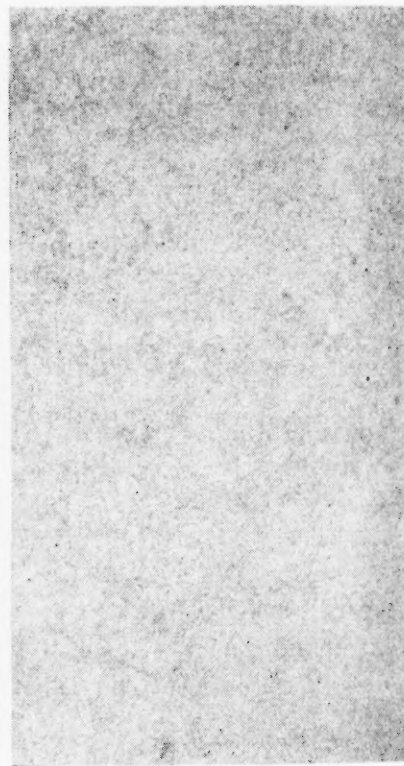
They had been stored two to four years before pulping, and a considerable amount of blue stain had developed; otherwise, they appeared sound, although no special care had been used in their storage and handling. Writing paper was made from the pulp equal in quality to much stationery that sells for \$1 a box. Light wrapping and grease-proof papers also were produced from it, and the combination of the pulp with other fibers gave book paper of excellent whiteness, opaqueness and strength. The raw material, loblolly pine, is found



**Raw Material Suitable for Bleached Sulphate Pulp**

A racked cord of Southern pine

growing throughout the South Atlantic and Gulf States from New Jersey to central Florida, westward to east Texas, and northward to Oklahoma, Arkansas and Tennessee. Its rapid growth forcibly suggests the practicality of perpetual operations on limited pulpwood areas, with a short cutting cycle and natural restocking. Applied to this species, the



Laboratory's modified sulphate process opens up the possibility of a "two-industry" forest—logs for lumber; tops, thinnings and other waste for pulp.

The same process applied with only detail changes to longleaf and slash pines provides the third element of a triple utilization program for these well-known species, which have for years yielded their double harvests of timber and turpentine.

(Part II, in conclusion, will appear next week.)



# Signs of Better Business

EXPORTS from this country in February made an unexpectedly good showing, having a total valuation of \$155,000,000, according to preliminary estimates, indicating an increase of about 3 per cent over the preceding month's exports. Imports of \$131,000,000, on the other hand, had a valuation 3 per cent less than in January.

INDUSTRIAL enterprises to the number of 205 expanded operations last year in territory served by the Associated Gas & Electric system. New industrial enterprises that located during 1931 in the area served by the system totaled 179; for these industries, 6814 wage earners will be employed. The established enterprises that expanded announced that 2438 employees would be added.

CHESAPEAKE & OHIO RAILWAY's net income in February, totaling \$1,470,000, not only exceeded February, 1931, but also was slightly ahead of January, 1932. The road's net earnings for February, 1931, totaled \$1,165,000, and for January this year they were \$1,196,000. The better showing is generally attributed to the 10 per cent wage cut, which became effective the first of February, and to increased freight rates that took effect in January.

SHOE PRODUCTION in February showed an increase of about 20 per cent as compared with January, thus exceeding even the most optimistic predictions made early in the year. Last year a sharp increase in output was reported in the late winter and early spring, but an equally sharp seasonal improvement is taking place this year. The February production, estimated at 25,200,000 pairs compared with 23,971,000 in the same month a year ago, thus registered a gain of 5 per cent.

January's production of boots and shoes, other than rubber, was estimated at 20,960,037 pairs, as compared with 19,555,554 pairs December, 1931, and 19,888,869 pairs in January, 1931.

SHENANDOAH LIFE INSURANCE Co., Roanoke, Va., gained more than \$11,000,000 insurance in force during the calendar year 1931, it was announced at the annual meeting of stockholders held last week. Robert H. Angell, president, announced that stockholders were well pleased at the progress made in 1931.

TEXTILE MILLS in the Southern states continue to expand production schedules. The Langley (S. C.) Cotton Mill is working 475 operatives and expects to continue through the summer with day and night shifts of 55 hours each, according to J. N. Badger, superintendent. With 335 employees, the Clearwater (S. C.) Manufacturing Co., producer of finished goods, is working to capacity, according to J. F. Foley, plant manager. Important new orders have been received recently and the plant is producing 1,200,000 yards of cloth weekly. The Erwin Mills, Cooleemee, N. C., has resumed full time operations, providing work for 700 employees in the production of tickings, coverts, suitings and flannels. New equipment has been installed in the Bevelle plant of the Avondale Mills, Alexander City, Ala. Flint Mills No. 1 and 2, Gastonia, N. C., have been operating on full schedule recently. Three hosiery mills at Marion, N. C., are operating continuously from Sunday midnight to Saturday midnight. The Acme Hosiery Mills, Inc., Asheboro, N. C., are constructing an addition and installing new machinery, representing a total expenditure of about \$200,000. The Ware Shoals (S. C.) Manufacturing Co. has completed a structure to house printing machines.

CARDED COTTON CLOTH stocks are the smallest since the beginning of comparable figures in January, 1928, states the Association of Cotton Textile Merchants. Shipments during February were 258,744,000 yards, or 5.9 per cent above production totaling 244,342,000 yards, while sales were 245,582,000 yards or .5 per cent above production.

RITTER LUMBER Co., Franklin, N. C., working in the Rainbow Springs section, has resumed operations after having been closed down since last July. About 110 men will be employed in the mill and in cutting timber.

BALL BROTHERS GLASS Co., Okmulgee, Okla., recently started fires beneath their tanks preparatory to manufacturing fruit jars, jelly glasses and tumblers. The plant will have 115 employees on the payroll.

SOUTHWESTERN BELL TELEPHONE Co., St. Louis, will expend approximately \$650,000 this year in Houston, Texas, for repairs and replacements.

LUMBER ORDERS for the week ended March 12 continued in substantial excess of the curtailed production that has characterized the lumber movement for several months, states the National Lumber Manufacturers Association. The 691 reporting mills showed that new business was 43 per cent greater than their combined cut of 106,757,000 feet, while shipments were 32 per cent above. In the previous week, 718 mills reported orders 43 per cent above and shipments 38 per cent above a cut of 102,853,000 feet. The Southern Pine Association reports that, for 125 mills cutting 20,871,000 feet for the week ended March 12, shipments were 27 per cent above production, while orders were 35 per cent above production and 6 per cent above shipments.

COAL PRODUCTION in the Pocahontas-Tug River field reached its highest mark of the year during the week of March 12, according to the Pocahontas Operators' Association. The total output for that period was 402,524 tons, a gain of 137,000 tons over the preceding week. As compared with the corresponding week of 1931 a gain of 53,684 tons is shown. Production for the calendar year to date was announced at 3,249,000 tons, a weekly average of 325,000 tons.

THE BALTIMORE AND OHIO RAILROAD COMPANY, beginning April 1, will operate its maintenance and equipment division five days a week instead of four. Among the units to be affected in this increased employment are Mount Clare shops at Baltimore, shops at Cumberland, Md., and at Newark, O.

COTTON EXPORTS for the 7 months of the present cotton season (August to February, inclusive) amounted to 5,925,000 bales, a gain of 1,013,000 bales compared with the corresponding period of last season. The Far East continues to be the heaviest buyer.

DOMESTIC BUSINESS conditions for the week ended March 12, says the Department of Commerce, have been influenced by a general firming of wholesale prices and continued improvement in the financial situation.

EAST TEXAS REFINING Co., Henderson, Texas, will reopen its plant April 1, following a remodeling and improvement program that has been under way for the past two months.

## \$9,000,000 DRAINAGE PROJECT

### Seven Miles Levee and Navigation Channel Under Contract

Okeechobee, Fla.—Following a recent award of contract to the McWilliams Dredging Company, New Orleans, La., seven miles of levee and navigation channel are now being constructed in connection with the Caloosahatchee River and Lake Okeechobee drainage, flood control and navigation project, upon which approximately \$9,000,000 will be expended by the Government, including \$2,000,000 to be contributed by local interests. According to Lt.-Col. L. V. Frazier, United States District Engineer, Jacksonville, contract for the 7 miles of levee and navigation channel, to traverse the south shore of Lake Okeechobee between Clewiston and Moore Haven, will involve \$394,000. Actual construction started February 19.

As soon as funds are available from the pending War Department appropriation bill and requirements by local interests have been met, the following work will be advertised: (a) Seven drainage spillways along the St. Lucie Canal, to cost about \$225,000; (b) 12 miles of levee and navigation channel, dragline section, involving the removal of approximately 4,800,000 cubic yards from the channel and placing it in the levee, this section being located along the south and east shore of Lake Okeechobee between Bacom Point and Miami Canal; (c) about 18 miles of levee, hydraulic section, along the west shore of Lake Okeechobee between Moore Haven and Fisheating Creek, involving placing in levee embankment about 7,500,000 cubic yards; (d) 5 hurricane gate structures, floodway control structure, and 5 drainage structures along the south shore, involving an expenditure of approximately \$500,000.

### Virginia Largest Soapstone Producer

Most of the world's output of slab and block soapstone is from Virginia, where the deposits extend through Nelson, Albemarle and Orange counties. One of the most extensive uses for block soapstone is the lining of smelting furnaces of kraft paper mills. Use of the rock in laboratory equipment, acid and chemical plants consumes about 10 per cent of the production. The slabs are used also for mortuary and mausoleum purposes. Because of its physical properties the stone is adapted for architectural ornamentation, electrical insulation, and for fireless cooking. Only a

small part of the waste soapstone is utilized, although it can be used in its pulverized form in competition with the lower grades of talc and in its crushed form for concrete aggregate. At present the largest consumers of this pulverized talc-like material are the rubber and roofing trades.

### Bids on \$500,000 Building

Austin, Tex.—Bids will be opened April 11 by the State Highway Commission and the State Board of Control for the construction of a \$500,000 State Highway Building at Brazos and Eleventh streets in this city. The structure will be 8 stories and basement. Adams & Adams, San Antonio, and Lang & Witchell, Dallas, are architects; W. E. Simpson Co., structural engineers, and Lloyd D. Royer, mechanical engineer, both of San Antonio.

### United States Chamber of Commerce to Meet

The Twentieth Annual Meeting of the United States Chamber of Commerce will be held in San Francisco, May 17-20, the central thought of this year's meeting of the National Chamber to be "The Job Ahead." There will be five general and 13 group sessions, the subjects for discussion including such topics as "State Control of Taxes and Debts," "Organized Effort in the Building Industry," "The Copper, Silver and Gold Situations," "Local Control of Public Expenditures," and so on. President Silas Strawn will open the discussion with an address, "What the Country Has Before It," and Paul Shoup, president of the Southern Pacific Co. and vice-president of the Chamber for the Western Division, will talk on "What the West Has Before It."

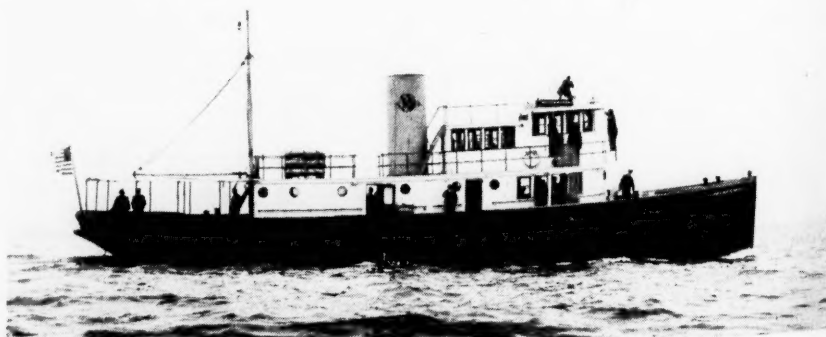
## Diesel-Electric Tug

The "Walter Wyman," first Diesel-electric tug built in Baltimore, was completed recently by the Spedden Shipbuilding Co., Inc., the vessel being delivered two months ahead of the contract time. It is to be used by the United States Public Health Service at Rosebank, Staten Island, New York.

Eight inches over 100 feet in length, the new tug has a beam of 23 feet 1 inch and a depth of 11 feet. It is powered by two Diesel engines manufactured by Fairbanks, Morse & Co., Chicago, who also furnished a two-cylinder, 30-horsepower generator compressor unit, oil and water pumps and the fire and bilge pumps.

Main electric generator is of the open type, with a kilowattage of 205 and a

voltage of 250. The 500-horsepower, double armature electric propulsion motor has a speed of 175 revolutions a minute. Motor and generator, as well as the 25-kilowatt, 125-volt open type exciters, were supplied by the Westinghouse Electric & Manufacturing Co. The size 4 steering engine and the windlass were built by the Sperry Gyroscope Co., New York. Among other equipment, the lighting fixtures were supplied by the Russell-Stoll Manufacturing Co., New York; plumbing fixtures by Crane Co., Chicago; Pyrene fire extinguishers by William H. Whiting Co., Baltimore, and life preservers and rings by the Armstrong Cork Co., Philadelphia, Pa. The Eclipse Air Brush Co., Newark, N. J., supplied the spray equipment used in painting the tug.



The "Walter Wyman," Recently Completed in Baltimore

# Modern Farm Development on the Georgia Coast

**COLONEL T. L. HUSTON**, former owner of the New York Yankees and builder of the Yankee Stadium in New York, and outstanding engineer with a record of achievement in Cuba and as Colonel of engineers in the World War, is making new conquests in the field of agriculture, in the fertile Altamaha Delta on his Butler Island estate on the Georgia Coast.

Winter tourists who, in past years, entered this land of winter flowers and sunshine by way of the Coastal Highway, will recall the thousands of acres of abandoned old rice plantations to be seen from the long bridge crossing the Altamaha River at Darien. Now these same tourist visitors behold a new and changed panorama. Colonel Huston has repaired the old slave-built dikes of Butler Island. He is excelling the work of Major Pierce Butler who farmed this same estate with a thousand slaves a hundred years ago and attained distinction in diversified agriculture before the war between the states. Colonel Huston has demonstrated the practicability of growing, at a profit, superior quality citrus fruits, figs, blueberries, lettuce, strawberries and numerous other truck crops and has thus opened the way for similar developments for smaller farmers on thousands of acres of fertile lands on the Georgia Coast, of which McIntosh County, the home of Colonel Huston, is the center.

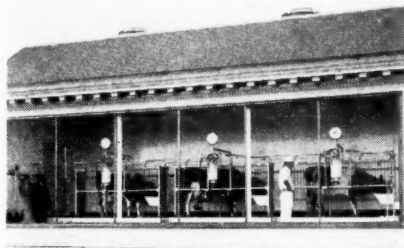
A model dairy plant has been established by Colonel Huston on this historic Butler Island. In this dairy enterprise he was guided by a desire to show a practical way to profit for the small farmers of this Coastal section, and for

By  
**F. H. ABBOTT**

Secretary,  
Georgia State Chamber of Commerce

others who may later come here to live. The same thought has pervaded his other agricultural enterprises in the section.

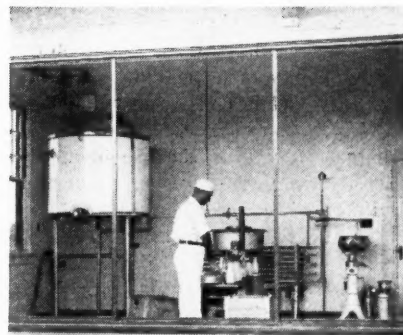
Into his barns and his milk product plants Colonel Huston has put into practice the latest developments of modern science in this field. The operations are located close to the Coastal Highway where, from their very accessibility, it is



"Milking Parlor," Behind Plate-Glass

evident to dairy farmers of the section that they are welcome to visit and learn by observation all that the plant can teach them.

Guernseys and Holsteins were selected for the demonstration, their larger size and feeding habits being regarded as



Milk-Bottling Room

best adapted to the luxuriant forage growth of the lower Coastal lands. In collecting the animals the best herds of the country were drawn upon. Before the introduction of this stock, carpet grass pastures had been developed, so productive that they maintained, for nine months in the year, mature cattle at the rate of three head per acre, a goal in reach of every farmer in the section who has low, river-bottom land. The feed barns are models in arrangement and construction, provided with equipment for cooling or heating to any required temperature; fan systems to control flies and air circulation; enamel-painted and clean and supplied with other modern equipment.

From the barn the cows pass along clean fenced paths to the "Milking Parlor," a plate-glass-sided structure, a view of which is shown in the accompanying illustration. At one point in the path, provision is made for the cows actually to wash their feet before entering the parlor. Inside, the cows may be viewed through plate glass as electric milkers are attached; the flow of milk is visible as it enters glass jars ten feet above the concrete floors. A set of scales attached to each jar indicates the mounting weight of the milk yielded. From the jar the milk passes through enameled and nicked pipes to the cooling room where it is cooled in full view, then bottled or separated and sent to the ice room.

Although the plant did not start operations until early in the present year,



Cow Barn, Milk Products Plant, and in the Center Background the Butler Island Home of Col. T. L. Huston, Darien, Ga.



local demand has taken care of the entire output of cream, butter and cheese. Certified milk, pasteurized milk, butter, cottage cheese and buttermilk can be supplied. As evidence of appreciation of the efforts being made to build up the dairy industry in this section, Chambers of Commerce of McIntosh, Liberty, and Long counties, three of the Coastal counties directly influenced by this development, following a recent inspection of the plant, voluntarily adopted a resolution to cooperate in every way.

In connection with Col. Huston's own development here, there is a branch of the Coastal Plain Experiment Station which he has provided with lands and irrigation and drainage; in this efficient field laboratory truck crop problems, winter forage and other problems incident to small family units are being studied, while the Chambers of Commerce affected are working on plans to make it possible for dairy and truck farmers from other sections to cast their lot on easy terms with farmers now here. The Georgia State Chamber of Commerce is guiding a survey being made to pool the marketing organizations and the energies of the business forces in the three counties, and the activities are being focused largely in the leadership of Colonel Huston.

There happens to be centered at this point on the South Atlantic Coast the largest shrimp, oyster, clam and crab production, while the great Altamaha abounds in fresh-water fish, and its valleys with forests for 75 miles from the coast can provide vast supplies for pulp mills and furniture factories of the future.

A number of projects are being studied intensively by well known engineers at the request of the Georgia State Chamber of Commerce, including W. H. Barnwell, director of the New Industries Division of the Georgia Power Company. One possibility is a quick-freezing plant to be used in processing 3,000,000 to 5,000,000 pounds of shrimp annually, together with other sea foods, and poultry, which is rapidly growing into a major industry in this section. Not only are poultry feeds cheap, but also the favorable conditions for poultry raising due to the peculiar conditions of soil and climate are important factors. In all these developments Colonel Huston is taking an active interest.

Bids will be opened April 11 in the office of Jas. A. Wetmore, Acting Supervising Architect, Treasury Department, Washington, for the construction of a new U. S. Marine Hospital at Memphis, Tenn., for which R. J. Regan and J. J. Weller, Memphis, are architects.

## \$1,250,000 18-Story Building in Dallas

A new 18-story and basement building erected in Dallas, Texas, by the Dallas Power & Light Company, at a cost of approximately \$1,250,000, is regarded as one of the outstanding structures of the Southwest, not only because of its modern design and construction, but also because, in that section, it is the tallest building in which practically all fabricating, both field and shop, was done by electric arc-welding. The building is finished with buff-colored brick, topping a base trimmed with black granite. The first floor and a portion of the second are air-conditioned by a system made by the Carrier Engineering Corporation, Newark, N. J. Full automatic elevators were installed by the Westinghouse Electric Elevator Company, East Pittsburgh, Pa. From the fourth floor to the top, the building is floodlighted with three colors—white, amber and red—the one color fading to the other at regular intervals.

Plans for the structure were prepared by Lang & Witchell, and general contract was handled by C. L. Shaw & Co., both Dallas. In addition to contracts for elevators and a cooling system, other major contracts were awarded as follows, all firms of Dallas:

**Electrical work**—William K. Grace Engineering Co.

**Plumbing and heating**—C. Wallace Plumbing Co.



Tallest Arc-Welded Building in Southwest

**Structural steel**—Mosher Steel & Machinery Co.

**Pneumatic tube system**—The Lamson Company of Texas

**Rubber tile flooring**—Dallas branch of Stedman Rubber Flooring Co., South Braintree, Mass.

**Composition flooring**—Blue Diamond Co.

## ST. LOUIS BUILDING ACTIVITY

### \$3,700,000 Municipal Auditorium Foremost Project Listed

St. Louis, Mo.—Building projects planned for early construction in St. Louis, involving the expenditure of millions of dollars, will do much toward stimulating general activities. Foremost among the projects listed is a \$3,700,000 municipal auditorium, for which contracts are expected to be awarded soon, while the North American Building to be erected at Twelfth boulevard and Washington avenue, for use as a passenger station for the Illinois Terminal Railroad System, is only second in importance. Bids have been submitted on this job, it is said, with the purpose of erecting 10 stories of the structure at once, at a cost of approximately \$750,000.

Another important project is the Homer G. Phillips City Hospital for Negroes, for which \$852,000 has been appropriated. Construction on this project is expected to begin in the spring. Plans have been announced by the Kroger Grocery and Baking Company for the construction of a 4-story plant to cost \$750,000, while the new Star Building on which construction has started, will cost \$1,500,000. Work has also started on a \$150,000 terminal building at the Municipal Airport, and Biddle Market, also to cost \$150,000, is well under way.

### Stone Contract on Senate Wing

Washington, D. C.—The George A. Fuller Co., Washington, general contractor for the new wing of the United States Senate Office Building, has awarded contract to John J. Morton, Charlotte, N. C., to supply Mount Airy granite for the building. This contract, involving about \$52,000, will result in the re-employment of 40 men at the Morton plant, it is said, to get the stone out. The plant will be operated on full schedule for the next five months to complete the job. Wyeth & Sullivan, Washington, are architects for the building, which will cost more than \$3,000,000. David Lynn, Architect of the Capitol, is supervising construction details.

# IRON, STEEL AND METAL MARKET

## March Steel Production at About the February Rate

Pittsburgh, March 21—[Special.]—Steel demand is showing no further increase, production since the first of the month having been at approximately the February rate, which was slightly above January and well above December. The showing is disappointing in that March has regularly been a month of decidedly heavier demand and January and February had furnished a nice start. Failure of the Ford Motor Company to buy steel in any quantity is held partly responsible, as shipments of automobile steel have decreased when ordinarily they would increase at this time. Apparently there have been increases in steel requirements elsewhere to offset this loss.

In percentage of existing capacity ingot production has been at a point or so above 25 per cent. While this is a common method of reporting, it is misleading, for even in the best times there never was a demand closely approaching present capacity, nor does the steel trade expect such a demand within a few years. The country may grow up to such a demand, or greater, but if or when it does, conditions will be such that much of the present capacity, not being thoroughly modern even now as to costs, would not be available. In the next few years various units will be abandoned. They are kept running now, in such limited way as is possible, to distribute employment, and when employment is easier to find steel producers will feel free to abandon plants. Present demand is 40 per cent of average production in the very active seven-year period through 1929.

Further but slow increases in demand are expected, by reason of the time of year and by financial conditions having already started to become more settled. The railroads are loosening up just a little in the matter of buying and are expected to do more. Some of the loans of the Reconstruction Finance Corporation are for improvements although the principal object was to take care of fixed charges.

The steel price stabilization movement is a success as far as time has permitted it to go. Buyers in general have been covered at old prices and while the new prices are generally quoted there has so far been little buying at these figures. The average level is slightly below that in the third quarter of last year, the main object being recovery from recent declines and steadiness, rather than sub-

stantial advances. Wire products have been firm right along but jobbers are still not out of their stocks acquired at lower prices. New quotations, Pittsburgh basis, are: Bars, shapes and plates, 1.60c; black sheets, 2.20c; galvanized, 2.85c; nails, \$1.95 on straight carloads.

## Metals Fairly Steady But Declines Still in Evidence

New York, March 21—[Special.]—Though metal markets have behaved in more steady fashion over recent weeks, the declining influences are apparently not yet completely spent. Thus during the past week lead dipped to new low levels since 1897 when the metal was reduced \$2 per ton at New York and \$1 per ton in the Middle West. The New York quotation became 3.15c per pound, New York, whereas the low point of 1897 had been 3 cents.

Tin, though not selling at the lowest point for the past several months, has at least been the cheapest in several weeks, selling at the middle of the week at 21½c per pound. Copper is just a shade above the low point of all time, selling at 6 cents per pound in the domestic market and at 6½c for export. Zinc has been holding in price well at 2.80c per pound, East St. Louis.

In most cases demand for the metals has been light. On certain days export demand for copper has been good but demand is by no means consistent from day to day. Lead demand has been fairly satisfactory and the decline in price Monday was a surprise to many. However producers wished to stimulate sales and it is possible too that they wanted to make these sales before February statistics were issued. The figures came out Thursday and revealed that the surplus stocks had increased 5,676 tons following a gain of 9,000 tons in January.

An exception to the declining trend of metals has been quicksilver which now sells at \$75 per flask of 76 pounds as against \$72 a week ago and \$65 six weeks ago. Quicksilver is becoming scarce since many mining operations have ceased.

The formal copper curtailment conferences which had been held at New York for about a month are over and foreign delegates have sailed home. The world producers have substantially agreed to cut production to 20 per cent of capacity from the present rate of 26½

per cent. Even this cut will not be sufficient to make severe inroads in the large surplus stocks which are overhanging the market, but this is at least a step in the right direction. American companies may bring about this curtailment in different ways. Some companies may work at above this rate during the winter and early spring and then shut down completely during the warmer months when labor will find it easier to get other employment. Copper Exporters, Inc., which was threatened with disbandment, has agreed to hang together, production to be sold abroad on the quota basis so that all producers will receive an equitable portion of going export business.

Though the American Bureau of Metal Statistics has not issued copper statistics since September figures came out, it is estimated that world production in February was 70,000 tons as against 108,000 tons in December. The present rate of consumption is estimated at 70,000 to 75,000 tons monthly and it is believed that the new curtailment plans will provide a production below this consumption level. The House of Representatives is introducing as a rider to its revenue bill a 4-cent duty on copper. This follows agitation for such a duty which has been waged for the past year, having originated in Arizona and spread to virtually all the copper producing states. Many have advocated a duty as high as 6 cents per pound.

As a result of low lead prices one of the prominent lead smelters in Utah was shut down. A price of 3.15c per pound, New York, on lead figures back to about 2½c per pound in Utah, which of course is an exceedingly low quotation.

Among the most active purchasers of lead recently have been the corrodors who prepare oxides for paint trade. The buying is in preparation for the spring and summer painting.

## Second Quarter Offers Encouragement

Birmingham, Ala., March 21—[Special.]—All indications point to a decidedly improved condition in both iron and steel during the second quarter, and backlogs in several directions promise to increase in an encouraging manner.

In steel, the intimation of advance of \$2 per ton on several of the prominent steel shapes is a move toward stabilizing the market and will be effective April 1. This will have a tendency to bring to an immediate conclusion the



slashing of prices on shapes which are now below a profit making level.

The railroads should soon be in position to place orders for needed products. Continuation of a program of construction and improvement on the part of the government, in building new post-offices and courthouses, in hospital building and in intercoastal and other river and port work will require iron and steel shapes in quantity. For instance, the Montgomery postoffice and courthouse project, for which contract was recently let, will require 1000 tons of structural steel, to be supplied by the Virginia Bridge & Iron Co. from the Birmingham shop. Tonnage is assured also for the construction of a postoffice and courthouse at Baton Rouge, La., a federal building at Chattanooga, Tenn., and work at other places.

Hardie-Tynes Manufacturing Co. is at work on a contract received from the government for upwards of 500 tons of steel for gates and other shapes for the intercoastal channel from Louisiana to Texas, to be developed at Harvey, La. The Virginia Bridge & Iron Company in the Birmingham shops has a sub-contract on some 500 tons of steel on the same contract. The original contract is just a little less than \$200,000.

Ingalls Iron Works Co. will build a dredge for U. S. engineers at Galveston, with 500 tons of steel involved. Numerous other contracts reported heretofore

have been accumulating on books of the structural steel fabricators.

While there has been a little decrease in the output of sheet and plate, attention is again called to the mills in this district capable of producing this class of steel. The addition to the sheet mill of the Tennessee Coal, Iron & Railroad Co. at Fairfield is described as the last word in sheet mill construction, while the Gulf States Steel Co. has a most capable mill at Gadsden. Inquiries have been received and good feeling aroused in both sheet and plate. The universal and other plate mills are also of the modern kind.

Six to seven open hearth furnaces are producing steel ingots in this district, the steel operations, based on ingot output, being estimated at 24 per cent capacity. Four blast furnaces are making iron, three on foundry and one on basic. Iron sales are in small lots but frequent.

#### PIG IRON

No. 2 foundry, 1.75 to 2.25 per cent silicon, \$11.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$11.50; iron of 2.75 to 3.25 per cent silicon, \$12.00; iron of 3.25 to 3.75 per cent silicon, \$12.50.

#### OLD MATERIAL

Steel rails	.....	\$10.50 to \$11.00
Steel axles	.....	12.00 to 13.00
Iron axles	.....	12.00 to 13.00
Heavy melting steel	.....	7.00 to 7.50
No. 1 cast	.....	8.00 to 9.00
Stove plate	.....	6.50 to 7.00
No. 1 railroad wrought	.....	6.50 to 7.00
Car wheels	.....	8.50 to 9.00
Tramcar wheels	.....	8.50 to 9.50
Machine shop turnings	.....	3.50 to 4.00
Cast-iron borings	.....	3.50 to 4.00
Rails for re-rolling	.....	9.25 to 10.00

## Tractors in Pipe Line Construction



This McCormick-Deering tractor, fitted with special attachment for lifting heavy loads, is shown at work on an important pipe line project. Pipe lines from Southern and Southwestern gas and oil fields are constructed through country where the going is heavy, and crawler-type tractors are able to maneuver despite lack of roads. The tractors are put to a wide variety of uses—hauling trailers loaded with pipe, pulling acetylene and electric welding outfits, lifting and bending pipe, and other jobs.

## Other Things Equal, Local Industries Should Be Favored

Flynn and Emrich Company  
Baltimore, Maryland.

#### Editor Manufacturers Record:

In your February 25th edition of the MANUFACTURERS RECORD, you have an editorial under the caption "Mistaken 'Buy-at-Home' Policy." Although we thoroughly agree with certain parts of your editorial, particularly that part which decries any system that would favor local industry, regardless of value received, nevertheless, we are strong believers in the "Buy-at-Home" policy operated under correct conditions. By correct conditions we mean that all things being equal; that is, the local manufacturer, offering a proposition as good or better than his competitors on the outside, should certainly be favored with the business; for instance, we are a Maryland corporation, paying large taxes to the city of Baltimore and state of Maryland, and we have a very strong feeling that any equipment purchased by the city or state that is in our line should be purchased from us, if we are able to furnish a satisfactory product, as good or better than our competitors on the outside and at prices equal or better.

In short, we do not believe in local suppliers enjoying any special privileges along the lines of furnishing less for the dollar spent than outside competitors, but we do believe that all things being equal, they should have the preference.

Another thing, we must not forget that charity begins at home, and today orders come very close to being charity to any business concern.

JAS. F. TURNER, Secretary.

## "Fair Dealing"

National Association Ornamental Iron,  
Bronze and Wire Manufacturers

Office of the President  
Fred L. Suhre  
St. Louis, Mo.

Washington, D. C.

#### Editor Manufacturers Record:

Your article on "Fair Dealing" is a very splendid setup, and quite timely in view of the unsatisfactory and demoralized conditions that exist in the relationship between contractor and sub-contractor. These are so bad that ways and means are being devised to develop a situation whereby they will be eliminated, as they must be if any degree of satisfactory business conditions is to prevail in the building industry.

As it is today, only dissatisfaction can result for owner, architect, contractor and sub-contractor. No matter what effort the substantial, reliable sub-contractor may make, it avails very little, if any, and we are fast arriving at a point where only the unreliable and so-called fly-by-night concerns will do the work required.

We appreciate your support in this matter. It appeals to us very much that you recognize the fallacy of the situation and that it is economically unsound to carry on business where shopping and chiseling of bids prevails.

FRED L. SUHRE, President.



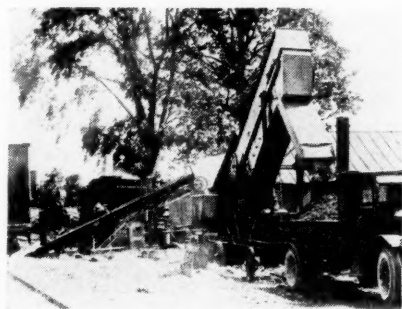
# HIGHWAYS AND MOTOR TRANSPORT

## New Type of Paving and Paving Equipment

As a result of years of study of bituminous materials and their application to paving, based on research made by K. E. McConaughay, the Pre Cote Corporation, Indianapolis, Ind., has developed a new type of paving and paving equipment. Mr. McConaughay, who wrote the formula for and used the first car of successful cut-back, has the credit for designing, naming and laying the first "retread" pavement. Development of Pre Cote has been carried on along the line of chemical research, and machines for using the process thus formulated have been designed by Mr. McConaughay. The process requires two new road building tools, one a portable emulsifying machine for converting asphaltic or tar bitumens into the emulsified state; the other consists of machines for combining these emulsions with suitable aggregate. The emulsifying machine is portable and may be transported on a small truck; the coating machine is mounted on wheels and may readily be trailed behind the truck. Auxiliary equipment includes a small portable water softener of the Zeolite type and a boiler to bring bitumen to the proper fluidity. Many Pre Cote operators use a light-weight high-capacity tank car heater for this purpose.

Pre Cote equipment is set up at stone quarries or at rail sidings where aggregate may be delivered, and an unloading device of the continuous conveyor type transfers the aggregate from hopper bottom cars into the hopper of the Pre Cote machine. Alternate to this is the clam shell with or without the concrete batching bin. A motor petrol grader and roller complete the equipment, with trucks and hand tools. Sequence of operations in Pre Cote paving work simplifies the process. With 400 or 500 feet of trackage to bring up stone and bitumen, plans are made for mechanical unloading, the Pre Cote machine being so set up that the unloader discharges into its hopper. The emulsifier is some distance away and connected to receive hot bitumen from the tank car for emulsification.

Emulsion is produced with sufficient pressure to discharge through a line 300 to 400 feet long without auxiliary pump. A portable tank car heater is brought close to the tank car and emulsifier, while the water softener and a tank of some 500 to 1000 gallons capacity is placed conveniently near the emulsifier to furnish it with soft water. A storage



Pre Cote Equipment in Operation

tank for emulsion is set at the other end of the emulsion line to keep the coating machine supplied with emulsion.

Assuming that holes and inequalities are to be corrected in an old road base, the grader is used to cut off high spots and shape edges. Depressions are then patched with Pre Cote made at the set-up, and the base and patches are rolled. If called for, however, a prime coat of emulsion may be applied to the base before rolling in order to mat up all dust or detritus existing on the surface of the old base. The base is now ready for the binder course which is made in the same manner as the patching material, the coating machine elevating the coating material so that it is discharged directly into delivery trucks.

Sequence of operations will vary with local conditions. Where long sections of road may be closed to traffic, probably the best arrangement is to run two days' output of binder course which may be dumped into spreader boxes and leveled with the same grader used for shaping the base. This course may be rolled at once or on the succeeding day. As the top course ( $\frac{3}{4}$ -inch to  $\frac{1}{4}$ -inch chips) is usually not more than half the depth of the binder course, one day's run of wearing course will be sufficient to cover two days' output of the binder. This is usually leveled and rolled out and opened to traffic, this schedule being followed until the job is entirely paved. Except on long mileages, it is usually more convenient to defer the seal coat, if it is specified, until binder and wearing course are placed and rolled.

Advantages of this type of road building are cited: Emulsion is made as and when needed and is delivered into the dipping vat of the coating machine at a continuous rate; and, as it is hot and fluid, viscosity is constantly varied by the operator to compensate for moisture or lack of moisture in the aggregate; the coating machine is so designed that aggregate is fed into the base of the machine, known as the immersion

pan, sliding down the sides of the vat without splashing; the same machine that makes emulsion for coating the stone provides emulsion at varying conditions required for prime coats and seal coats; no loss of asphalt or emulsion is possible, as it is manufactured as needed.

An important accomplishment of the equipment is that a perfect cold-laid mixed material may be made from local materials—gravels, trap rock and other classes of aggregate which may heretofore have been considered repellent to the application of asphalt, hot or cold. This is accomplished through a method of blending tar and asphalt in an emulsified form, enough of the tar being used to give the asphalt sticky qualities. Use of gravels and low grade types of aggregates make possible permanent road construction at low cost, and emulsions may be made to meet any specifications for emulsified bitumens.

The entire equipment weighs less than 10 tons, with capacities of 1000 tons of precoated aggregate daily, either base or top material, and 30,000 gallons of emulsion daily.

## \$15,000,000 Louisiana Road Bonds

Baton Rouge, La.—Road bonds in the amount of \$15,000,000, a portion of \$35,000,000 advertised, have been sold by the Louisiana Highway Commission to the Pyramid Securities Company of New Orleans, La., an affiliate of the Union Indemnity Company. The bid provides that \$12,000,000 of the purchase price shall be paid immediately and that the remaining \$3,000,000 shall be paid in securities, to remain on deposit until the bonds themselves can be sold at par. The bonds bear an interest rate of 5 per cent.

## \$500,000 Sewer Bonds Sold

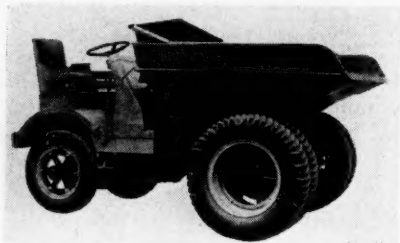
Louisville, Ky.—The Commissioners of Sewerage have sold \$500,000 sewer bonds to Almstedt Brothers, Louisville, on the basis of par and  $4\frac{1}{2}$  per cent interest. The purchasers also took an option on \$1,500,000 additional bonds on the same terms. Proceeds will be used to pay for projects under way and yet to be contracted.

Jefferson City, Mo.—The State Highway Commission opened bids on 77 road and bridge projects in 33 counties of the state, which will involve a cost of approximately \$3,700,000.

# NEW AND IMPROVED EQUIPMENT

## Koehring Wheel Dumptor

Designed for dirt-hauling jobs where tractive ground conditions permit the use of wheels, the Koehring Wheel Dumptor, manufactured by the Koehring Division of the National Equipment Corporation, Milwaukee, Wis., is built to provide dependable high speed transpor-



To Provide High-Speed Transportation at Low Cost

ation at low cost. Exceptional performance is obtained by combining a relatively small load on large tires with excess motor power, state the manufacturers, also by providing a short wheel base, and by instantaneous front gravity dump and spreading type body. Outstanding features are: Three speeds forward and three speeds reverse; constant mesh transmission; automatic kickout pan; short turning radius; interchangeable wheel equipment, and low cost of operation. Load carrying capacity is 4 cubic yards.

## New and Larger Marion Stripping Shovel

The Clemens Coal Company, Kansas City, Kans., recently placed an order with the Marion Steam Shovel Company, Marion, Ohio, for a stripping shovel with a dipper of 18 cubic yards capacity. Two shovels, costing \$228,000 each, now in use in the Pittsburgh district, and of 16 cubic-yard dipper capacity, have been regarded as the world's largest. The new and larger Marion shovel, to be known as Type 5560, will be equipped with a 95-foot boom and will be mounted on crawler trucks. It will be fitted with a new type of movable counterbalance, located at the rear of the rotating frame. This counterbalance is suspended by a cable attached to the hoisting drum and moves in a vertical position, in the opposite direction to the dipper. By its use, a larger dipper than standard may be employed, thereby increasing production and reducing operating costs. Ac-

cording to the manufacturers, this shovel will be the most modern of its type, and it is expected to set a new standard of performance for open pit operations. It will incorporate the usual Marion features of design, such as outside boom and inside handle, hydraulic jacks for equalizing and leveling the upper and lower frame structures, crawlers with steering features, three-part hitch to the dipper, etc. It is expected to be in operation by September 1, 1932.

## Trailer Type Spreader

The Hercules-Ditwiler Trailer Type spreader, now being made by the Ditwiler Manufacturing Company, Canton, Ohio, embodies several new features which contribute to its efficiency in spreading chloride for dust prevention, also for spreading salt, sand, cinders or chloride on icy streets, and chips, slag or other covering on penetrated stone, or for any spreading of light aggregates 1 inch or smaller on roads, in construction or maintenance. It will also spread lime or fertilizer on fields. The spreader is operated by its own air-cooled motor, the width of spread, 6 to 30 feet, being regulated by speed of the motor. The amount of aggregate depends upon truck speed, the spreader being designed especially for use with lighter dump trucks, but by simple adjustment it may readily be used with larger trucks. Agitator

blades in the feed hopper give the material a rotary motion and break up lumps. An additional hopper is supplied for spreading chloride from non-dump truck bodies. Weight of the spreader, engine and hoppers is 535 pounds.

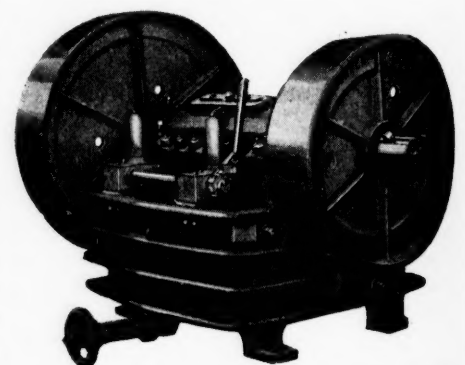
## Knowles Electrolytic Hydrogen Generators

An important improvement in Knowles Electrolytic Hydrogen Generators is announced by the Linde Air Products Company, New York, sole agents for the Knowles generators in the United States and Canada. A new Double-Depth Generator has been developed and put on the market, in addition to Standard Generators. W. F. McKay, formerly chief engineer of the International Oxygen Company, which previously handled Knowles generators, is now with the Linde organization in charge of sales for these units. In the Double-Depth generator, 50 per cent greater capacity has been obtained over the Standard generator, while space for housing a producing plant has been decreased one-third. Knowles Double-Depth and Knowles Standard Electrolytic Hydrogen generators are now being made in 36 sizes and capacities, ranging from 166 to 15,000 amperes with productions of 2.6 cubic feet to 243 cubic feet per hour for each generator.

## Pioneer Jaw Crusher

A new Pioneer crusher, made in several sizes, has been announced by the Pioneer Gravel Equipment Mfg. Co., Minneapolis, Minn., manufacturers of screening, crushing and loading machinery. This improved type of crusher combines mechanical simplicity with great strength, and is designed for quantity production at minimum cost. The mechanism is enclosed by a steel cover plate over the push wedge and the pull wedge, and there is a completely enclosed gear box for the worm gear shift. Vertical adjusting screws make it possible to adjust the jaws regardless of whether or not the crusher is operating. The base is of heavy carbon electric steel, holding the stationary jaws in a vice-like grip. Opposite is the movable jaw strongly anchored to the pitman, the latter being of the heavy-duty type, oper-

ating smoothly on lubricated bronze bearings. Eccentric shaft is of heat-treated chrome nickel steel and side jaws are of manganese steel. Jaw openings range in size from 8 inches by 24 inches to 15 inches by 36 inches. Reduction range is from 12 inches down to 1/2 inch in one operation.



Combines Mechanical Simplicity With Strength



# CONSTRUCTION DEPARTMENT and NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

## Airports, Airplane Plants, Etc.

La., Barksdale Field—George E. Lamb, Constructing Q. M., Shreveport, receives bids April 4 for constructing flying field drainage system. Following estimating: P. M. Davis, 401 Commercial Natl. Bank Bldg.; Red River Construction Co., both Shreveport; W. H. O'Toole Construction Co., Monroe; Carl Erickson, Pineconing, Mich.; J. B. McCrary Co., Atlanta, Ga.; Harrison-Wright Co., P. O. Box 928, Charlotte, N. C.; McEachin & McEachin, Southern Bldg., Little Rock, Ark.; N. A. Saigh Co., 510 Bldrs. Exchange Bldg., San Antonio, Tex.; Meriweather Supply Co., 1312 Jordan St., Shreveport, and W. S. Dekey Clay Mfg. Co., Texarkana, Ark., both bidding on material contract. 3-17

Md., Easton—Chesapeake Air Ferries, Inc., chartered; Malcolm L. Hathaway, Edw. T. Miller.

Miss., Natchez—Bd. of Supervisors, H. W. Campbell, reported, plans leasing 60 acres on Somerset Place for airport.

Mo., St. Louis—O. R. Parks, Mgr., Lambert-St. Louis Municipal Airport, reported, announced proposition to establish high speed passenger airplane manufacturing plant being considered by outside interests; investment of \$250,000.

Mo., St. Louis—Kaplan-McGowan Co., Franklin-American Trust Bldg., contractor for Terminal Bldg. at Municipal Airport, Bridgeton, completed excavation, foundation work to start at once; building will be 199x 67 ft.; 2 stories and observation tower in center of roof; east side of building will have stairway 41 ft. wide leading to landing containing 4 pillars entire height of building; wrought iron porches; basement will contain barber shop, wash room, storage space, boiler room and pump room; waiting room on first floor with post office, ticket office, women's rest room, etc.; second floor will contain hotel rooms and open air promenade; building connected with flying field by tunnel. 3-3

N. C., Charlotte—William Swann and Vernon F. Farrow acquired Charlotte property of Weeks Aircraft Corp., Milwaukee, Wis., and 5-yr. lease on Charlotte airport; will enlarge; Col. Jack Grady, Field Mgr., Charlotte Airport.

Okla., Blackwell—City, Dwight Randall, Clk., probably rebuild burned hangar.

Tennessee—R. S. Boutelle, Director of State Aeronautics Div., Nashville, reported, making preliminary inspection of sites for locating state-aid municipal airports at Tip-topville, Athens and Sevierville.

Tex., Lubbock—R. B. R. Air Service, Inc., chartered; Byron Robertson, David C. Ruse.

Tex., Randolph Field, San Antonio—Aqua System, 2 Lafayette St., New York City, reported, has contract for installing two 25,000 gal., 4 ton, underground gasoline storage tanks, control equipment; tanks to be furnished by Govt.; Capt. Arthur W. Parker, Constructing Q. M. 3-3

Va., Langley Field—See Electric Light and Power.

## Bridges, Culverts and Viaducts

### Proposed Construction

D. C., Washington—Dist. Comms., Dist. Bldg., Washington, have low bid from Ligon & Ligon, 3310 Ridgewood Ave., Baltimore, for

conc. pedestrian underpass, Bennings road. 3-10

Fla., Miami—City Comsn. authorized bids for work needed to safeguard bridge structures and replace cables in connection with river widening and deepening \$20,000.

Fla., Tampa—Hillsborough County, E. W. Carroll, County Engr., advises will not rebuild burned bridge. 3-17

Ky., Louisville—Pennsylvania R. R. F. J. Hobert, Engineer in Charge, Louisville, advises no actual construction has been started on 14th St. grade elimination project; at present negotiations for property and plans and surveys are under way. 7-30-30

Miss., Charleston—Tallahatchie County Supvrs., Mrs. L. N. Henry, Clk., open bids Apr. 4 for bridge, Ascalmore Creek, Etheridge Pl.; county to furnish all material; creosote piling, cap sills and steel, oak or cypress stringers or floors.

Miss., Columbus—Lowndes County Supvrs., H. L. Bailey, Clk., open bids Apr. 4 for bridges and culverts: Bridge or culvert on Waverly road, Dist. 2; creosote pile and timber bridge, Jim Creek, Togo road, District 5.

Miss., Magnolia—Pike County Supvrs., Chas. E. Brumfield, Clk., opens bids April 4 for bridge, Homesville and Summit road, over Clear Creek, 2 mi. south Summit, Fourth Dist.

Miss., Tylertown—Walshall County Supvrs., Seth E. Ginn, Clk., open bids Apr. 4 for bridges, Fifth Dist.; repairs to Wes Manning bridge, Jesse Howell bridges (2); Bill Sandifer bridge and Nelson Marbury bridge, all Fourth Dist.

Oklahoma—State Highway Comsn. receives bids for 2 bridges. See Construction News—Roads, Streets and Paving.

Tennessee—State Highway Comsn. receives bids for 2 bridges. See Roads, Streets and Paving.

Texas—State Highway Comsn. plans 8 bridge projects. See Roads, Streets and Paving.

W. Va., Charleston—Kanawha County Court let contract to Kerr & Bishop, Morgantown, at \$9266, for 4 bridges, Mills Creek-Jordans Creek road, Big Sandy Dist.; several culverts, Haynes Bros., Morgantown, \$4608.

### Contracts Awarded

Ga., Decatur—DeKalb County, E. W. Weir, County Engr., and Seaboard Air Line Ry., W. D. Faucette, Ch. Engr., Norfolk, plan \$10,000 bridge over tracks between Emory University and Decatur; rein. conc., conc. piers; construction by county forces; Austin Bros. Bridge Co., 1195 Mickelberry St., S. W., Atlanta, has contract for struc. steel.

TENNESSEE—State Highway Comsn., R. H. Baker, Commr., Nashville, let contracts for 2 bridges, totaling \$146,312, in following counties:

Lincoln—bridge over Elk River, Route 15, Hagen Construction Co., Fayetteville, \$53,684;

Cheatham—bridge over Harpeth River, Route 49, E. A. Wood & Co., Nashville, \$90,628.

Tex., San Benito—San Benito Bridge Co., J. M. Whitelew, Dallas, reported, let contract

to Dodds & Wedegartner, 400 N. Travis St., Dallas, for 420-ft. steel, rein. conc. suspension type bridge over Rio Grande River near here.

## Canning and Packing Plants

Miss., Wiggins—C. E. Jones interested in establishing canning plant in Stone County; building secured.

N. C., Plymouth—Crockett Packing Co., John W. Darden, Mgr., Washington, reported, negotiating for building for tomato cannery; E. R. Jackson and Mayor Owens, local committee.

## Concrete and Cement Plants

La., Lafayette—C. L. Briggs, Lake Charles; W. B. Landes, Beaumont, Tex., reported, construct conc. pipe plant on old sugar refinery site; cost \$15,000.

## Cotton Compresses and Gins

N. C., Edenton—Evans Mills, Inc., chartered; B. W. Evans, Edenton; W. M. Jones, Norfolk, Va.

## Cottonseed-Oil Mills

Okla., Chickasha—J. B. Klein Iron & Foundry Co., reported, has contract for 250 tons fab. struc. steel for Chickasha Cotton Oil Co.

## Drainage, Dredging and Irrigation

Florida—War Dept., Washington, allotted \$75,315 to restore and maintain 30-ft. channel in St. Johns River, Jacksonville to the Atlantic; majority of work, which will be dredging, etc., will take place near lower end of river; work under supervision of U. S. Engr. Office, Florida Theatre Bldg., Jacksonville.

Florida—U. S. Engr. Office, Florida Theatre Bldg., Jacksonville, started widening and deepening Miami River from mouth to N. W. 36th St., Miami, 5½ mi.; Standard Dredging Co., 233 Broadway, New York, Gen. Contr.; Clark Dredging Co., 357 S. W. North River Dr., Miami, has sub-contract for dredging, and J. O. Webster, 308 Alton Rd., Miami Beach, for moving buildings and obstructions. 1-7

La., Abbeville—Maronne Drainage Dist. of Vermillion Parish, J. M. Moss, Sec., let contract to F. L. Pere, Abbeville, for cleaning and dredging canal leading south from Intracoastal Canal and across properties of Oneil Stelly and others and for dredging canal 18 ft. wide, 5 ft. deep, approx. 1¼ mi., at 10 cents per cu. yd. 2-18

Virginia—U. S. Engr. Office, foot of Front St., Norfolk, has low bid from Atkinson Dredging Co., Norfolk, at \$0.166 per cu. yd., for dredging approx. 176,638 cu. yd. material, place measurement, Pagan River, Va. 2-25

## Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

D. C., Washington—Combustion Engineering Corp., 198 Madison Ave., New York, re-



ported, low bidders for boilers for heating plant for U. S. Govt., at 12th, 13th, C and D Sts. 3-3

Ga., Waycross—Georgia Power and Light Co., Valdosta, advises not taking over white way system of city, as company already owns it; plans no addition; E. C. Rees, Mgr., Waycross. 3-17

Ky., Bardwell—A. Buys, Jasper, Ind., reported, has franchise for erecting and operating electric lighting system.

La., Alexandria—Louisiana Ice & Utilities, Inc., reported, applied to T. B. Larkin, Dist. Engr., Vicksburg, Miss., for War Dept. permit to construct electric transmission line across Red River, above mouth of Bayou Rapides; plans include line of 3 wires erected on towers 110 ft. high.

Okla., Brinton—Oklahoma Gas and Electric Co., Oklahoma City, reported, granted 25-yr. franchise.

S. C., Laurens—Duke Power Co., Charlotte, N. C., reported, acquired several properties of National Gas & Electric Co., Battle Creek, Mich., including electric properties at Laurens.

Tenn., Nashville—Bd. of Public Works, reported, let contract at \$20,063, to Babcock & Wilcox Co., Beaver Falls, Pa., for 1000 h. p. boiler installation city light plant; Riley Stoker Corp., Worcester, Mass., at \$8978 for companion stoker. 3-10

Tex., Fort Sam Houston—General Construction and Electric Co., Wichita, Kans., reported, low bidder, at \$19,766, for constructing electric underground distributing and street lighting system.

Va., Langley Field, Hampton—Vanderlinde Electric Corp., Rochester, N. Y., low bidder for vault, transformers and distributing system for Constructing Q. M., Fort Monroe.

### Fertilizer Plants

S. C., Darlington—Farmers Fertilizer and Storage Co., Inc., chartered; Samuel Want, Melvin Hyman.

Tex., El Paso—Pass City Milling Co., capital \$60,000, incorporated; W. B. Gates, 1611 N. Campbell St.

### Foundry and Machine Plants

Tex., Dallas—Baker Ice Machine Co. of Texas, J. L. Baker, Pres., reported, establish branch plant at 2006 Commerce St.

Tex., San Angelo—San Angelo Foundry and Machine Co. increased capital \$40,000 to \$100,000.

### Garages and Filling Stations

Ala., Birmingham—Standard Oil Co., 801 Sixth Ave., S., construct, day labor, filling station, S. W. Cor. 32nd St., S., and Sixth Ave., S.

D. C., Washington—Lord Baltimore Filling Stations, Inc., T. J. O'Connell, American Bldg., Baltimore, Md., erect filling station 9th and Pennsylvania Ave., S. E.; bids opened March 26. Following estimating: Thomas F. Leonard, Brehm's Lane; Lacchi Con. Co., Munsey Bldg., Fidelity Engineering Corp., 6300 Belair Rd., all Baltimore, Md.; A. Lloyd Goode, Ins. Bldg., Industrial Eng. & Con. Co., 1909 Minnesota Ave., S. E.; Martin Bros., 1341 Connecticut Ave.; Bahen & Wright, 916 R. I. Ave., N. E.; E. A. Pasagno Co., 2301 Cathedral Ave.; Federal Con. Co., 55 Rust Bldg.; R. J. O'Neill, 1635 Connecticut Ave., all Washington.

D. C., Washington—A. M. Poynton Co., 1427 I St., reported, low bidder for service station 2115 Georgia Ave.; 1 story; brick and conc.; overhead doors; slag roof.

Fla., Clearwater—Wallace Motor Co., incorporated; F. E. Wallace, J. P. Harris.

Ga., Swainsboro—J. A. Coleman, reported, erect brick and stucco filling station N. Main St.; comp. roof; conc. areaways; owner builds.

Ky., Louisville—Chandler Auto Supply Co., incorporated; Seldon E. Brown, Marion E. Taylor Bldg.

Md., Baltimore—Joseph Geiger, 3022 E. Monument St., considering erecting 98 stalls and filling station Eager Place and Kenwood Ave.; conc., block or brick; 1 story; owner builds.

Md., Baltimore—Goodrich Silvertown, Inc., Akron, O., and 112 N. High St., reported, leased and will remodel first floor of buildings, 301-307 Fallway, for tire service and filling station.

N. C., Lincolnton—Lincolnton Chevrolet Co., Inc., capital \$25,000, chartered; Guy E. Cline, G. C. Beam.

Okla., Tulsa—Cross Construction Co., 504 Beacon Life Bldg., W. M. Cross, Pres., construct filling station; conc. floors, tile roof; cost \$10,000; M. C. Cross, Archt. See Want Section—Miscellaneous.

S. C., McCormick—McGrath Motor Co., incorporated; Mrs. King McGrath.

Tenn., Memphis—B. & P. Tire & Oil Co., Fred Montesi, reported, erect 2 stations, S. W. Cor. 2nd and Vance Sts. and S. W. Cor. S. Parkway, East and Carnegie St.; Regan & Weller, Archts., East and Carnegie Sts.; may change name to State Tire and Oil Co.

Tex., San Antonio—Mohawk Tire Co., incorporated; E. G. Hendrix, 2150 W. Summit St.

Va., Charlottesville—Oil Service Corp., Preston Ave. and Harris St., let contract to Charlottesville Lumber Co., for erecting service station; 32x13 ft.; 1 story; cinder block and stucco; conc. floors; Richmond Oil Equipment Co., 1115 E. Marshall St., Richmond, equipment contractors. 3-17

Va., Danville—Union Auto Service Co., Inc., chartered; M. C. Martin.

Va., Langley Field, Hampton—Newport Contracting & Engineering Co., Lee Hall, reported, has contract for garage, War Dept. 2-11

Va., Petersburg—Auto Service & Storage Corp., incorporated; Gray M. Smith, 28 Pine St.

### Gas and Oil Enterprises

Ark., Fort Worth—Standard Oil Co., Henry Armstrong, Local Agt., reported, construct \$35,000 bulk station Midland Blvd. and North St.; 40x90 ft.; steel warehouse will include office 36x48 ft. garage; storage room and storage warehouse; corrugated steel sides; steel beam construction with cement floors.

Ky., Louisville—Mt. Sterling Aetna Oil Co., capital \$25,000, incorporated; Curtis C. Webb, Mockingbird Valley, Louisville.

Md., Baltimore—Penn-Men Oil Co., Inc., Monument and Constitution Sts., incorporated; Joel Mendels, Lake Drive Apt.

Mo., Carthage—City, reported, granted 20 yr. natural gas franchise to J. N. Sloan of Western States Utilities Co., Tulsa, Okla., subject to ratification by people April 5; will probably receive gas franchise at Webb City and Carterville.

Tex., Breckenridge—Mid-Texas Production Co., capital \$100,000, incorporated; Art C. Cox, Charles H. Clark.

Tex., Fort Worth—John E. Phillips Development Co., capital \$250,000, incorporated; John E. Phillips, 3713 Bellaine St.

Tex., Houston—Albert P. Plummer Drilling Co., capital \$50,000, incorporated; Albert Plummer, Gulf Bldg.

Tex., Mineral Wells—Shastex Oil and Gas Co., incorporated; O. C. Chapin, Fred A. Bond.

Tex., Pampa—Forster Oil Co., capital \$16,000, incorporated; J. H. Forster, John V. Osborne.

Tex., Pharr—Briggs-Spence Co., capital \$31,000, incorporated; R. W. Briggs, T. R. Spence, contractors.

Tex., Tyler—Root-Rhodes Oil Co., capital \$150,000, incorporated; C. M. Root, Harry Manes.

### Ice and Cold-Storage Plants

Ark., Elaine—See Water Works.

Ga., Austell—Southern Ice Co., R. J. Hancock, Pres., Marietta, reported, has plans by Robert & Co., Engrs., Bona Allen Bldg., Atlanta, for ice plant; 1 story; conc. found.; brick walls; comp. roof; conc. floors; owner builds.

N. C., Wadesboro—Hightower Ice and Fuel Co., reported, install 5 ton ice plant also ice storage room.

Tenn., Cleveland—Bradley County Ice Co., capital \$50,000, incorporated; M. H. Thompson, Sweetwater, let contract to Rowe Transfer Co., 418 N. Broadway, Knoxville, for installation machinery; contract for building to be let soon. 3-10

Tenn., Knoxville—B. T. Ice Co., University & Western Aves., B. T. Giddens, Pres., erecting 140x36 ft. plant; found. built; brick and sheet iron; conc. floors; comp. roof; V. L. Nicholson Co., Contr., S. Central Ave.; install complete electric equipment for 40 ton ice plant; Frick Ice Machine Co., Waynesboro, Pa., Equip. Contrs. 3-17

Va., Danville—Ice Delivery Service, Inc., capital \$50,000, incorporated; E. C. Tudor, Roanoke; manufacture ice.

### Land Development

Fla., Miami—James C. Ganyard, Inc., chartered; J. C. Ganyard, 1511 S. W. 11th Terrace; E. C. Sprankle.

Fla., Orlando—Blue Ribbon Groves, Inc., chartered; G. G. Crawford, M. H. Roberts.

Mo., Kansas City—Kasper Realty Co., incorporated; Fred J. Kasper, 303 Brush St.

Mo., St. Louis—Vandeventer Realty Co., incorporated; F. A. C. Skinner, 1378 Semple Place.

S. C., Greenville—Consolidated Realty Co., Inc., chartered; W. D. Workman, Chamber of Commerce Bldg.

Tenn., Johnson City—Hannah Realty Co., incorporated; Farrel B. Hannah, Kyle Slaughter.

Tex., Brownsville—Smith-Dulaney Co., incorporated; Clyde H. Smith, R. O. Dulaney, Jr.

Tex., League City—Johnson Bros., reported, have contract for improvements county park.

Va., Bristol—Bristol Farms and Homes, Inc., chartered; T. L. Porterfield.

Va., New Castle—Fork Mountain Land Co., capital \$50,000, incorporated; Merle E. Tracy, Halesite, Long Island, N. Y.

Va., Norfolk—Bailey Realty Corp., capital \$20,000, incorporated; A. G. Bailey, 550 Pembroke Ave.

Va., Radford—Padgett-Evans-Southern, Inc., chartered; W. W. Padgett.

W. Va., Huntington—Arcade Service Corp., incorporated; L. Rice, L. M. Cohen.

### Lumber Enterprises

Ala., Tuskegee—East Alabama Lumber Co., J. B. Ross, Sales Mgr., does not intend replacing burned rough shed within near future.

Ark., Springdale—Pioneer Lumber Co., reported, acquired local assets of Ferguson Lumber Co.

Florida—Frank O'Bannon, LaBelle, reported, acquired timber rights on 1000 acres land near Lake Trafford in Collier County; will move equipment to tract, install saw mill.

Miss., Stephenson—Foster Creek Lumber Corp. formed with H. A. Testard, Pres., A. W. Berdon V. P., both New Orleans, La.; reported, acquired sawmill town of Stephenson and all holdings of Foster Creek Lumber & Mfg. Co.; plan reopening mill.

Mo., Springfield—Robert E. Lee Lumber Co., capital \$25,000, incorporated; Robert E. Lee, E. C. Hughes.

Okla., Hominy—Baughman Lumber Co., Blackwell, reported, acquired Spurrier Lumber Yard.

S. C., Darlington—Ramsey Plywood Co., capital \$20,000, incorporated; J. S. Ramsey, R. M. Norment.

### Metal-Working Plants

La., Harvey—Southern Steel Works Co., 908 Second Court, West, Birmingham, reported, has contract for 120 tons fab. steel for plant for Continental Can Co., Inc., 4633 W. Grant St., Chicago, Ill.; Favrot & Livaudais, Archts., Nolan Bldg., New Orleans. 3-10

### Mining

N. C., Hendersonville—Southern Exploration Co. of Asheville and Johnson City, Tenn., A. H. Wood, Johnson City, Pres., reported, install \$20,000 machinery for mining operations at old Boylston gold mine on Transylvania-Henderson county line.

### Miscellaneous Construction

Arkansas—U. S. Engr. Office, McCall Bldg., Memphis, Tenn., has low bid from John S. Kochitsky, England, Ark., at 19.85 cents per cu. yd. for 12,200 cu. yd. earthwork, vicinity Jacksonport.

Fla., Okeechobee—L. V. Frazier, Lt. Col. Corps of Engineers, Dist. Engr., U. S. Engr. Office, Florida Theatre Bldg., 128 E. Forsyth St., Jacksonville, advises regarding status of project for Caloosahatchee River and Lake Okeechobee Drainage Areas, 7 mi. levee and navigation channel along south shore Lake Okeechobee between Clewiston and Moore Haven now under contract with McWilliams Dredging Co., Canal Bank Bldg., New Orleans, involving \$394,000; work was to begin Jan. 6, 1932, and to be completed Oct. 10, 1932; contractor was delayed and actual operations began Feb. 19. Following will be advertised for bids as soon as funds from pending War Dept. appropriation bill are made available and all requirements by local interests with reference to rights-of-way and local contributions of funds have been met: 17 drainage spillways along St. Lucie Canal, involving approx. \$225,000; 12 mi. levee and navigation channel, dragline section, involving the removal of approx. 4,800,000 cu. yd. from navigation channel and placing in levee (this section located along south and east shore Lake Okeechobee, be-

tween Bacom Point and Miami canal); approx. 18 mi. levee, hydraulic section, along west shore Lake Okeechobee, between Moore Haven and Fisheating Creek, involving placing in levee embankment approx. 7,500,000 cu. yd.; 5 hurricane gate structures, 1 flood-way control structure, and 5 drainage structures along south shore, involving approx. \$500,000; date of advertising will depend on funds being made available and rate of dispatch in handling right-of-way and other local requirements.

Mississippi—U. S. Engr. Office, P. O. Box 667, opens bids Mar. 29 for approx. 32,980 cu. yd. earthwork, Panola-Quitman Drainage Dist. Floodway, Panola County.

Mo., Bagnell—St. Louis Excavation Co. has contract for fish hatchery of Union Electric Light & Power Co., St. Louis; H. Proserpi, Springfield, has contract for excavation; E. C. Proserpi, supt. of construction. 12-31-30

Mo., Kansas City—Missouri Pacific R. R. Co., E. A. Hadley, Ch. Engr., St. Louis, advises regarding \$1,000,000 construction project at Kansas-Missouri elevator; work house comprises wooden section provided in original installation and conc. section in 1926; wooden section was recently burned and construction project to be carried out now is replacement of this wooden section with new concrete structure, including all modern equipment and car dumper; recently let contract to Edwin Ahlskog, 407 S. Dearborn St., Chicago, Ill.

W. Va., Marmet—U. S. Engr. Office, Huntington, W. Va., opens bids Apr. 5 for pumps and tanks at Marmet power house; A-2 vertical, triplex plunger pumps, each with capacity of 200 gal. per min. against pressure of 430 lb., and each driven through silent chain by 2 60-h. p., 900-r. p. m., normal torque, low starting current motors for operation on 440 volts, 3 phase, 60 cycle, a. c., one motor only complete with electrical control for temporary operation; B-1 hydro-pneumatic, 2 compartment accumulator, 24 in. in diam., 7 ft. 7 in. overall length, with capacity of 160 gal.; C-1 steel pump priming tank with capacity of 700 gal., all delivery Belle, W. Va. 12-3-31

### Miscellaneous Enterprises

Ark., Forrest City—Imperial Theaters, Inc., capital \$15,000, incorporated; Louis F. Haven, Charles Haven, Sr.

Ark., Van Buren—George Meadors, reported, interested in establishing cheese plant.

Florida—American Tung Nut Development Corp. and International Tung Nut Syndicates, Inc., both newly incorporated at Chicago, and Crestview, Fla., reported, plan development of 78,000 acres cut over lands in Santa Rosa and Okaloosa counties secured from Bagdad Land & Lumber Co., also acquired 22,000 acres in Okaloosa owned by Okaloosa Land Co.; Adolph Gortmoller, George F. Koessler, George Dick and others interested; will plant small acreage at Munson; nursery stock to be secured from Marhoeffer Bros., Chicago, Ill.

Fla., Fellsmere—Fellsmere Sugar Co., F. W. Heiser, V. P., will not begin erection of sugar mill before May 1; will have grinding capacity of 1000 tons of cane daily; engineering and construction work will be by company's forces.

Fla., Inverness—Bert Vaughn, Lecanto, reported, has contract for Coca-Cola plant, brick and conc.

Ga., Columbus—Columbus Tile and Marble Works, incorporated; G. M. Tamburini; Columbus; M. L. Angelini, Montgomery, Ala.

Ga., Washington—Wilkes County Co-Operative Creamery, M. L. Callaway, reported, install machinery for cannery.

Ky., Dawson Springs—Dawson Springs Water Co., capital \$18,000, incorporated; H. G. Hamby, A. E. Orion.

Ky., Louisville—Southland Apartments, Inc., capital \$153,000, incorporated; R. R. Williams, Bankers Trust Bldg.

Md., Baltimore—Fidelity Press, Inc., 105 W. Pratt St., incorporated; Lewis R. Wolfe, Edw. J. Smith.

Md., Baltimore—Phillips Brothers Corp., 609 S. Caroline St., incorporated; Levin W. Phillips, 1739 E. 30th St.

Md., Baltimore—Domestic Utilities, Inc., Garrison Blvd. and Western Md. Ry., incorporated; Clifford E. Loman, 5615 Magnolia Ave.; James K. Cullen.

Md., Baltimore—Continental Lacquer Co., 410 Conway St., Robert Fisher, Plant Mgr., will probably rebuild burned plant.

Miss., Biloxi—Currie & Corley, Raleigh, Miss., reported, has contract for dairy and ice cream plant for Ness Creameries, Clifton Cox, Mgr., Callomee & W. Howard St.; brick walls; conc. and steel; steel truss roof; 1

and 2 stories; 50x100 ft.; Hirsch & Watson, Archts., 1501 Chemical Bldg., St. Louis, Mo. 2-14

Mo., North Kansas City, Kansas City—Blue Hevin Corp., A. T. Feddersen, Pres., reported, leased building, 1900 E. Armour Rd., for manufacturing cleansing agent used by dry cleansers and laundries.

Mo., Sedalia—Counter Top Advertising Co., incorporated; Arthur L. Crabb, Wm. Allen.

Mo., St. Louis—Yur Favorit Cake Co., capital \$50,000, incorporated; Christian Hauck, 3641 Flood St.; John Hamm, Wm. H. Hauck.

Mo., St. Louis—Missouri Caverns, Inc., chartered; W. H. Mook, 3720 Washington St.

Mo., St. Louis—Airtherm Mfg. Co., capital \$75,000, incorporated; R. J. Tenkonohy, 4906 W. Pine St.

Mo., St. Louis—St. Louis Thread Co., incorporated; John A. Knabb, 6218 Southwood

N. C., Durham—Kam Drug Mfg. Co., incorporated; Harris L. King.

N. C., Fayetteville—Reinecke-Dixon Co., reported, has contract for plant for Coca Cola Bottling Co.; 2 stories and basement; 60x80 ft.; conc. found.; struc. steel; steel sash; limestone trim; freight elevator; Stiles S. Dixon, Archt.

Okla., Okmulgee—Merger of Okmulgee Daily Democrat with Okmulgee Daily Times, reported, announced by Times Publishing Co.; continue The Democrat as weekly newspaper.

Okla., Tulsa—Alco Products, Inc., Phil-tower Bldg., division American Locomotive Co., 105 Hudson St., New York, reported, acquired Jackson Engineering Corp., 11 E. Fifth St., specializing in designing of gasoline recovery plants and other oil field equipment.

S. C., Sumter—Carolina Home Craft Co., incorporated; T. H. Clark, Mrs. A. N. Moore; manufacture clothing.

Tenn., Knoxville—Alice's Handy Cabinet for Electric Grill, capital \$25,000, incorporated; J. Fisher Chumbley, L. R. Randolph.

Tenn., Lawrenceburg—Salant & Salant, Inc., 56 Worth St., New York, reported, have site on First St. for location of shirt plant.

Tenn., Nashville—Uncle Hiram Roofing Co., Inc., chartered; Joe E. Yowell, Madison St.

Tex., Amarillo—Amarillo Screen Co., incorporated; Arthur F. Agee, H. L. Spafford.

Tex., Big Springs—Producers Dairy Products Co., incorporated; T. W. Long, L. C. Hill.

Tex., Center—News-Champion Publications, incorporated; Tol T. Smith, Tom E. Foster.

Tex., Fort Worth—Wilson Spring and Bumper Works, Inc., chartered; E. M. Wilson, 2112 Fairmount St.

Tex., Houston—Jack Hostetter Co., incorporated; Jack Hostetter, 2204 Fanning St.; advertising.

Tex., Lamesa—Heiningson Brothers, New York City, reported, operate egg cracking plant in plant of West Texas Milk Products Co.; eggs to be dried and packed in cartons for shipping.

Tex., Orange—Commercial Pulp and Paper Co., Texas corporation, Sumner M. Bump, Pres., recently organized to take over properties of Yellow Pine Paper Mill Co., has completed deal; will expend \$75,000 on improvements; will manufacture all types of high grade paper using wood pulp, and rice straw; raw materials to be acquired in gulf coast area of Texas and Louisiana; daily capacity 80,000 tons. 1-7

Tex., Pharr—Briggs-Killian Co., capital \$20,000, incorporated; R. W. Briggs, R. H. Klossier; construction.

Va., Hampton—Hampton Marine Railway, Inc., capital \$15,000, incorporated; S. C. Powers.

Va., Lynchburg—G. and W. Mfg. Co., Loft Bldg., incorporated; J. S. Garber, Pres., 502 Clay St.; continue existing business.

Va., Lynchburg—Apollo Theatre Corp., incorporated; E. Lynn Shappe, Washington, D. C.

Va., Norfolk—Nelson Vertical Paper Cutter Co., Inc., capital \$30,000, incorporated; Oscar L. Gilbert, Bowdens Ferry Rd.

Va., Norton—Bolling Theatre, Inc., chartered; R. C. Whitsett.

Va., Salem—Salem Theatre, Inc., capital \$25,000, incorporated; V. E. Kelsey, Blacksburg.

Va., South Hill—Tarzan Products Corp., capital \$20,000, incorporated; S. Dorch.

W. Va., Wheeling—Dyer-Weill Shoe Co., incorporated; Carl H. Dyer, Ave. A, Edgdale, Wheeling; L. S. Weill, Youngstown, O.

### Motor Bus Lines and Terminals

N. C., Asheville—Blue Bird Taxis, Inc., capital \$25,000, incorporated; G. H. Early, J. M. Sanonds.

Tenn., Nashville—State Railroad and Public Utilities Comsn., Nashville, reported, granted interstate certificate to Carolina-Tennessee Freight Line, operating between Copperhill and Knoxville via Murphy, N. C.

Va., Roanoke—Southern Coach Co., Patrick Henry Hotel, organized with E. R. Pfug, Pres.; subsidiary of Short Lines, Inc., New York City; operate coaches between Knoxville, Tenn., and Washington, D. C.

### Railways

Ky., Louisville—See Bridges, Culverts and Viaducts.

Okla., Oklahoma City—See Sewer Construction.

Va., Roanoke—Norfolk & Western Ry. Co., Clyde Cocke, Pur. Agt., opens bids Mar. 30 for requirements of locomotive steel tires, Apr. 1 to June 30, Contr. Serial AA-620.

### Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

#### Proposed Construction

Florida—State Road Dept., H. H. Wells, Chmn., Tallahassee, has low bid from Wilson & Waters, Orlando, for 6.197 mi. clearing, grubbing, grading, draining, between Moore Haven and Main's Corner, Proj. 960, Road 67, Glade County. 3-10

Louisiana—State Highway Comsn., A. P. Tugwell, Chmn., Baton Rouge, making surveys for "short cut" highway to connect New Orleans with Mississippi Gulf coast; plans connecting Pearlport or Logtown by direct route with Rigolets bridge.

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, opens bids March 29 or 4 roads:

Anne Arundel County—1.18 mi. conc., Furnace Creek-Marley Creek road to Marley Creek, An13-74, FAP 229-B;

Baltimore City—0.43 mi. sheet asphalt, Franklinton road, Baltimore St. to Franklin St., Be-115-74;

Carroll—1.02 mi. conc., Bachman Mills road, from near Bachman Mills toward Melrose-Penn State Line road, CI-103-52;

St. Mary's—1.48 mi. gravel, Chaptico-Budds Creek road toward New Market, Sm-95-84.

Maryland—State Roads Comsn., L. H. Steuart, Sec., Baltimore, has low bids for surface treating highways: Districts 1 and 2—Caroline, Cecil, Dorchester, Queen Anne's and Somerset Counties, 19.31 mi., 42,545 gal., Item H, Ugit Sales Corp., 1401 Arch St., Philadelphia, Pa., 12 cents per gal.; Item G, Cooper Corp., Salisbury, Md., 5.45 cents per gal.; Districts 3, 5 and 8—Anne Arundel, Howard, Montgomery and Prince George's Counties, 47.97 mi., 99,033 gal.; Districts 3A, 7 and 8A—Anne Arundel, Calvert, Charles, Howard, Prince George's and St. Mary's Counties, 254.03 mi., 1,246,905 gal., and Dist. 4—Baltimore and Harford Counties, 36.17 mi., 81,516 gal., Items G, Lansdale Co., Hackensack, N. J., 4.89 cents, 4.08 cents, 4.78 cents, respectively, per gal.; Items H, Barrett Co., 36th and Grays Ferry Ave., Philadelphia, Pa., 11.83 cents, 12.02 cents, 11.67 cents, respectively, per gal.; Dist. 6—Garrett and Washington Counties, 4.52 mi., 10,749 gal., Southern Asphalt Co., North Blvd. and Ellen Rd., Richmond, Va., 7.21 cents on Item G and 12.41 cents on Item H. 3-10

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, has low bids or 3 roads:

Baltimore City—1.54 mi. conc. shoulders and combination curb and gutter, Reisters-town road, Be-113-74, P. Reddington & Sons, 2 E. Lexington St., \$17,503;

Garrett—1.70 mi. conc., Lock Lynn-Gorman road, G-67-62, FAP 264-A, Samuel G. Polano, Fairmont, W. Va., \$41,365; 2.43 mi. conc., point on Kitzmiller road near Altamont road toward Swanton, G-73-64, M. F. McCabe & Co., Salisbury, Pa., \$52,778. 3-10

Md., Baltimore—City, Bd. of Awards, Office of City Register, City Hall, opens bids Mar. 30 for grading, cement conc. paving, Beckleysville road (new location), vicinity Pretty-boy Dam, 12,000 sq. yd. cement conc., Cont. 614; Geo. Cobb, Highways Engr.; plans \$5.

Md., Baltimore—City, Geo. Cobb, Highways Engr., has low bid from Arundel Construc-



tion Co., 910 Trinity St., at \$14,370 for 25,300 l. f. conc. curb and gutter, Cont. 613. 3-10

Maryland—State Roads Comsn., Harry D. Williar, Jr., Ch. Engr., Baltimore, considering advisability of building highway around city of Baltimore.

Md., Towson, Baltimore—Baltimore County Comms., John R. Haut, Ch. Clk., Court House, open bids Mar. 29 for 1.7 mi. conc. shoulders, 15th Dist.

Md., Towson, Baltimore—Baltimore County Comms., Jackson P. Grason, Roads Engr., opens bids Mar. 29 for Group No. 1, being conc. shoulders on Back River Neck road, Eastern Ave. to Cape May road, 1.7 mi. (15th Dist.).

MISSOURI—State Highway Comsn., T. H. Cutler, Ch. Engr., Jefferson City, has low bids for 72 roads totaling approx. \$3,700,000 in following counties:

Adair—4.280 mi. graded earth and gravel, SV-1, A. C. Longfield, LaPlante, \$16,255;

Andrew—1.563 mi. graded earth, SV-1, Nevada Construction Co., Nevada, Mo., \$5064;

Audrain—4.201 mi. graded earth and gravel, SW-2, Martin Wunderlich, Jefferson City, \$7396; 0.987 mi. gravel, SW-3, same contractor, \$2078; 3.560 mi., 3.820 mi., 4.965 mi., 4.685 mi. 20-ft. conc., 126A, 126B, 126C, 346A, Cameron Joyce Co., Keokuk, Ia., \$40,199, \$50,675, \$54,750, \$45,002;

Barry—3.409 mi., 3.577 mi. gravel, 112AP-1A, 112AP-2A, M. E. Gillioz, Monett, \$2248, \$2036;

Bollinger—3.070 mi., 3.222 mi. gravel, 51-12, 51-13, Bunnell & Mack Construction Co., Paragould, Ark., \$35,347, \$18,745;

Barton—4.735 mi. graded earth, SA-1, O. O. Fuller Construction Co., Nevada, Mo., \$8234;

Boone—4.736 mi., 3.088 mi. gravel, SC-7, SC-8, Martin Wunderlich, \$12,833, \$20,337;

Camden—2.553 mi. gravel, 54-64A, A. E. Keith Construction Co., City Bank Bldg., Kansas City, \$16,486;

Carter—0.348 mi. gravel, SM-1, Jos. Kesi & Sons, Edwardsville, Ill., \$11,678;

Dent—4.537 mi. gravel, 72-7, M. E. Gillioz, \$35,447;

Chariton—2.320 mi., 2.553 mi., 3.664 mi. gravel, SA-M4A, SA-M5A, SA-M6A, Fellin Bros., Marshfield, \$1554, \$1751, \$2556;

Dunklin—4.030 mi. gravel, Ref. 19-1, Bunnell & Mack, \$10,919;

Cole—3.621 mi., 3.403 mi., 3.402 mi. 20-ft. conc., 1E, 1F, 1G, Kelly & Underwood, Granby, \$35,115, \$34,031, \$30,951;

New Madrid—0.627 mi. 10-ft. conc., 62-5A, Jos. Kesi & Sons, \$12,441;

Franklin—4.443 mi., 2.489 mi., 2.828 mi., 2.056 mi., 351-B, 351-C, 351-D, 351-A, Davis Construction Co., Inc., Boonville, \$96,371, \$30,444, \$27,640, \$43,575;

Jefferson—3.090 mi., 3.096 mi. 20-ft. conc., 259G, 259H, Davis Construction Co., Inc., \$56,964, \$51,291;

Greene—4.125 mi., 4.547 mi. 20-ft. conc., 190A, 190B, Kelly & Underwood, \$73,165, \$79,545;

Holt—3.855 mi., 4.230 mi., 0.755 mi. graded earth, 342A, 342B, 342D, Dan Sherrer Construction Co., Kansas City, Kans., \$18,938, \$38,349, \$1537;

Lafayette—2.642 mi., 0.985 mi., 4.152 mi., 3.908 mi., 4.015 mi. 20-ft. conc., 332-B, 332-C, 332-D, 332-E, 332-F, Deering & Davidson, St. Louis, \$31,111, \$11,168, \$49,054, \$45,642, \$48,689;

Macon—3.484 mi., 3.721 mi. 20-ft. conc., 345-A, 345-B, C. H. Atkinson Paving Co., Macon, Mo., \$33,023, \$36,598;

Mississippi—4.943 mi., 3.006 mi. gravel, SB-1, SB-2, Richmond Construction Co., Advance, \$2552, \$2368;

Miller—4.254 mi., 3.977 mi., 4.284 mi., 0.191 mi. 20-ft. P. C. C. pavement or 20-ft. asphaltic conc., 54-58A, 54-59A, 54-60A, 54-61A, Alt. 1, Harrison Engineering & Construction Co., Fairfax Bldg., Kansas City, \$48,722, \$40,311, \$45,255, \$1917; Alt. 2, Bridges Asphalt Paving Co., St. Louis, \$74,622, \$61,735, \$70,248, \$2935; Alt. 3, Nolan Bros., Minneapolis, Minn., \$19,087, \$16,208, \$21,952, \$808;

Montgomery—2.671 mi., 2.737 mi. gravel, SD-3, SD-4, Martin Wunderlich, \$14,686, \$965;

St. Louis—3.427 mi., 2.520 mi. 20-ft. conc., 77TR-3, 77TR-4, Sandy Hites Co., Kansas City, \$87,497, \$60,962;

Pemiscot—2.76 mi., 2.570 mi. gravel, SD-3, SD-4, SE-2, R. B. Potashnick, Cape Girardeau, \$6684, \$5030, \$11,069; 2.308 mi. gravel, SM-1, Martin Wunderlich, \$6929;

Phelps—4.542 mi., 4.432 mi., 3.513 mi. gravel, SH-3A, SH-4A, SH-5A, Neyer Construction Co., Billings, \$2673, \$2608, \$2067;

Pulaski—2.920 mi. gravel, 28-1, M. E. Gillioz, \$13,687;

Pike—1.819 mi., 4.976 mi., 3.493 mi. 20-ft. conc., 275-E, 275-F, 275-G, Jos. Kesi & Sons, \$25,839, \$61,098, \$36,603;

Putnam—4.024 mi. graded earth and shale, SC-3, Jos. L. Pohl, Nevada, Mo., \$11,780;

Ste. Genevieve—3.786 mi. gravel, 32-38, E. K. Porter, Carrollton, \$23,261;

Schuyler—2.670 mi. graded earth, SA-2, C.

H. Atkinson Paving Co., Chillicothe, Mo., \$11,343;

Stoddard—4.038 mi. gravel, SA-3, Bunnell & Mack, \$14,587;

Sullivan—3.945 mi. gravel, 6-36, Carson-Cuddy Construction Co., Brunswick, \$30,413;

Cass—4.489 mi., 3.314 mi. graded earth, 35TR-18, 35TH-19, M. E. Gillioz, \$13,906, \$23,515. 3-3

Mo., St. Louis—Bd. of Public Service, City Hall, opens bids April 12 for constructing and improving streets, Lettings 4839 to 4395, inclusive.

North Carolina—State Highway Comsn., State Highway Comsn., E. B. Jeffress, Chmn., Raleigh, opens bids soon for 11 mi. grading, paving, road from Ela to Smokemont.

OKLAHOMA—State Highway Comsn., Sam R. Hawks, Chmn., Oklahoma City, opens bids Mar. 29 for 3 roads, including 2 bridges, in following counties:

Beckham—5.996 mi. grading, draining, State Highway 34, point approx. 1.5 mi. east Elk City north, approx. 5.996 mi. to Beckham-Roger Mills County line, \$1,790 cu. yd. "A" exca., 756 cu. yd. "B" exca., 464 cu. yd. "C" exca., 518.64 cu. yd. "A" conc., 46,141 lb. deformed steel bars, 208 l. f. 18-in. r. c. pipe, 240 l. f. 24-in. same, SAP 812-A;

Rogers-Muskogee-Craig-Tulsa—65,820 l. f. guard rail, Div. 1;

Tillman—6.695 mi. grading, draining, 2 bridges, being R. C. B. and 3 36-ft. I-beam span and span bridges, Highway 14, extending from Frederick south; roadway, 93,433 cu. yd. "A" exca., 160.82 cu. yd. "A" conc., 12,327 lb. rein. steel, 247 l. f. 18-in. r. c. pipe, 193 24-in. same, 44 l. f. 30-in. same; bridges, 730 cu. yd. "A" exca., 188.51 cu. yd. "A" conc., 76.0 cu. yd. "A" conc., 27,370 lb. rein. steel, 228 l. f. conc. hand rail, 53,700 lb. struc. steel, 700 l. f. r. c. piling.

Tennessee—State Dept. of Highways and Public Works, R. H. Baker, Commr., Nashville, rejected bids for 5.8 mi. Knoxville-Smoky Mountains Park Road; take new bids April 8.

S. C. Parris Island—Chief, Bureau of Yards and Docks, Navy Dept., Washington, takes bids soon for widening conc. roads at marine barracks; plans, etc., \$10.

TENNESSEE—State Dept. of Highways and Public Works, R. H. Baker, Commr., Nashville, opens bids Apr. 1 for 5 roads in following counties:

Dickson—8.4 mi. surface treatment, Route 48, between Dickson and Charlotte;

Marion—3 mi. resurfacing, State Highway 2, Montague toward foot of mountain;

Grundy—7 mi. resurfacing, Route 56, Montague to point 7 mi. north;

Lawrence—7 mi. surface treatment, Highway 6, between Maury County line and end of conc. pavement north of Lawrenceburg; Marion and Grundy projects to be let as one project;

Carter—7 mi. resurfacing, Highway 37, Hampton to point 7 mi. east.

Tennessee—State Highway Comsn., R. H. Baker, Commr., Nashville, opens bids Apr. 8 for 5.891 mi. grading, draining, State Highway 35, between Shooks Gap and FAP 248-A; 2 bridges over 20-ft. span to be let with roadway contract; award dependent upon rights-of-way being secured by Knox County and City of Knoxville for section between Proj. 248-C and Henley St. Bridge, Knoxville.

Tenn., Knoxville—Knox County Highway Comsn. opens bids Apr. 5 for widening and other improvements, Martin Mill Pike.

TEXAS—State Highway Comsn., Gibb Gilchrist, Highway Engr., Austin, opens bids Apr. 4 and 5 for 31 roads, involving \$494,500, in following counties:

Franklin—3.20 mi., Titus-Franklin County line west, M-1-0-6, Highway 1, 33,792 sq. yd. double bitum. surface treatment, 36 hours rolling;

Winkler—15.818 mi., Kermit to Ward County line, M-6-R-3, Highway 82, 176,322 sq. yd. 3/10 gal. seal coat;

Ward—7.288 mi., Monahans to Winkler County line, M-6-S-3, Highway 82, 81,241 sq. yd. 3/10 gal. seal coat;

Stephens—16.65 mi., southern city limits of Breckenridge to Stephens-Eastland County line, M-8-S-3, Highway 67, 175,824 sq. yd. double bitum. surface treatment, 500 hours rolling; 17.76 mi., intersection Highway 1-A, 2.64 mi. east of Breckenridge north to Stephens-Young County line, M-8-G-4, Highway 67, 187,545 sq. yd. 3/10 gal. seal coat;

Rusk—12.60 mi., Henderson to Rusk-Panola County line, M-10-P-6, Highway 64, 147,840 sq. yd. double bitum. surface treatment, 250 hours rolling;

Gonzales—12.06 mi., Gonzales-Caldwell County line to Gonzales, M-13-E-4, Highway 29, 121,278 sq. yds. special double bitum. surface treatment, 180 hours rolling;

Eastland—5.05 mi. and 0.40 mi., Calahan County line east on Highway 23, and from 0.6 mi. west of Palo Pinto County line west on Highway 1, M-8-T-3, Highway 23, and M-8-X-3, Highway 1, 58,022 sq. yd. double bitum. surface treatment, 280 hours rolling;

Hardin—12.607 mi., Kountze to Tyler County line, M-12-S-4, Highway 40, 133,136 sq. yd. 3/10 gal. seal coat;

San Patricio—0.47 mi., 0.6 mi. north of Aransas Pass to Gregory, M-16-I-3, Highway 57, 100,000 sq. yd. single bitum. surface treatment, 100 hours rolling;

Ellis—5.00 mi., Midlothian north, M-18-V-2, Highway 34, 52,800 sq. yd. double bitum. surface treatment;

Dallas—7.303 mi., Garland to Dallas-Rockwall County line, M-18-W-2, Highway 1, 7,120 sq. yd. single bitum. surface treatment, 100 hours rolling; 8.00 mi., Denton-Dallas County line to 1.20 mi. south of Farmers Branch, M-18-X-2, Highway 40, 84,480 sq. yd. 3/10 gal. seal coat; 6.34 mi., east city limits Dallas east, M-18-T-2, Highway 15, 74,390 sq. yd. 3/10 gal. seal coat;

Williamson—5.00 mi., Liberty Hill south-east, M-14-B-5, Highway 29, 52,800 sq. yd. double bitum. surface treatment, 100 hours rolling;

Blanco—19.60 mi., Blanco-Comal County line to intersection with Highway 20, M-14-K-4, Highway 66, 230,000 sq. yd. special double bitum. surface treatment, 390 hours rolling;

Young—0.93 mi. at approaches to Brazos River bridge near South Bend, M-3-A-2, Highway 67, 500 cu. yd. common exca., 16,370 sq. yd. fine grade subgrade and shoulders, 350 hours extra rolling subgrade and base, 350 M gal. sprinkling, 4125.2 cu. yd. water bound broken stone macad. base, 2733 cu. yd. material hauled additional ¼ mi., 648 cu. yd. aggregate for triple bitum. surface treatment, 11,787 gal. asphalt, 500 sq. yd. removing existing pavement;

Williamson—15.00 mi., Travis County line to 3 mi. northwest Leander, M-14-K-3, 176,000 sq. yd. double bitum. surface treatment, 300 hours rolling;

Erath—31.117 mi. double bitum. surface treatment, Highway 10, Hood County line to Comanche County line, M-2-D-4, \$70,000;

Caldwell—7.0 mi. double bitum. surface treatment, Highway 29, Travis County line to point 4 mi. south of Lockhart, M-14-G-5, 82,133 sq. yd. double bitum. surface treatment;

Fannin-Hunt—9.70 mi. double bitum. surface treatment, Highway 34, Ladonia to Wolfe City, 102,432 sq. yd. double bitum. surface treatment, 112 hours rolling;

Mason—steel, conc. bridge, 22-ft. roadway, over Comanche Creek, Highway 9, \$57,000, FAP 17, Reop.

Fort Bend—15.14 mi., 3 gal. bitum. seal coat, Highway 3, Harris County line to Brazos River, M-12-V-4, 150,981 sq. yd. 3/10 gal. per sq. yd. bitum. seal coat;

Anderson—4.55 mi. double bitum. surface treatment, Highway 40, Frankston to Cherokee County line, \$10,700;

Callahan—5.65 mi. double bitum. surface treatment, Highway 23, end of conc. pavement in Cross Plains to Coleman County line, M-8-U-3, 53,065 sq. yd. double bitum. surface treatment, 200 hours rolling;

Colorado—4.95 mi., 3/10 gal. bitum. seal coat, Highway 3, from point ¼ mi. east Eagle Lake to Wharton County line, M-13-J-4, 49,368 sq. yd. 3/10 gal. per sq. yd. bitum. seal coat, 30 hours rolling;

Fort Bend—2.70 mi. double bitum. surface treatment, Highway 19, Harris County line south to point 1 mi. north of Fresno, M-12-0-4, 28,512 sq. yd. double bitum. surface treatment;

Hardin—4.793 mi., 3/10 gal. bitum. seal coat, Highway 8, Silsbee to Neches River, M-12-x-4, 50,614 sq. yd. 3/10 gal. per sq. yd. seal coat;

Jefferson—15.20 mi., 3/10 gal. per sq. yd. bitum. seal coat, Highway 3, point .33 mi. east of Liberty County line to Amelia, M-12-R-4, 151,590 sq. yd. gal. per sq. yd. bitum. seal coat;

Wise—11.09 mi. double bitum. surface treatment, Highway 24, 4 mi. north of Bridgeport via Chico to Jack County line, M-2-W-3, 117,200 sq. yd. double bitum. surface treatment, 220 hours rolling;

Reeves—0.10 mi., 3/10 gal. per sq. yd. bitum. seal coat, Highway 1, 4.9 mi. west of Toyah to 4.5 mi. east of Toyah, M-6-Q-3, 96,096 sq. yd. 3/10 gal. per sq. yd. bitum. seal coat;

Wilson—4.0 mi. bitum. seal coat, Highway 81, Gonzales County line west, 37,554 sq. yd. bitum. seal coat, 60 hours rolling;

Waller—1.947 mi. double bitum. surface treatment, Highway 20, extending east from Brazos River, M-12-U-4, 20,560 sq. yd. double bitum. surface treatment, 75 hours rolling;

Hardin—2.738 mi., 3/10 gal. per sq. yd. bitum. seal coat, Highway 8, intersection Highway 40 to Jefferson County line, M-12-W-4, 28,920 sq. yd. seal coat;

Bexar—9.15 mi. special ½-in. limestone



rock asphalt surfacing treatment, Highway 3, San Antonio to Medina County line, 96,645 sq. yd. limestone rock asphalt surface treatment, 278 tons special 1-in. down lean rock asphalt patching;

**Orange**—3.21 mi. 3/10 gal. per sq. yd. bitum. seal coat, Highway 62, Newton County line to Mauriceville, M-12-T-4, 33,898 sq. yd. 3/10 gal. per sq. yd. bitum. seal coat;

**Red River**—3.10 mi. double bitum. surface treatment, Highway 5-A, Armona north to intersect Highway 5, M-1-N-6, 29,097.4 sq. yd. double bitum. surface treatment, 30 hours rolling;

**Harrison**—7.66 mi. double bitum. surface treatment, Highway 8, Panola County line northwest to Roseborough Springs road, M-10-N-6, 82,009.4 sq. yd. double bitum. surface treatment, 154 hours rolling;

**Sabine**—8.10 mi. 3/10 gal. per sq. yd. bitum. seal coat, Highway 8, San Augustine County line south to intersect Highway 93, M-11-I-4, 76,032 sq. yd. 3/10 gal. per sq. yd. bitum. seal coat, 125 hours rolling;

**Stephens**—16.83 mi. 3/10 gal. per sq. yd. bitum. seal coat, Highway 157, Breckenridge north to Throckmorton County line, M-8-H-4, \$19,500;

**Uvalde**—304.6-ft. steel, conc., bridge over Blanco River, Highway 3, 22-ft. roadway, consist of 30-ft. 6-in. conc. girder spans, 1 120-ft. steel truss span, conc. pile bents, piers and abutments, FAP 289, Reop., \$38,600;

**Cherokee**—4.35 mi. double bitum. surface treatment, Highway 22, Oakland to Rusk, M-10-K-6, \$10,200.

**TEXAS**—State Highway Comsn., Gibb Gilchrist, Highway Engr., Austin, plans 15 roads and 7 bridge projects in following counties:

**Walker-San Jacinto**—rock base with light asphalt top, Highway 45, Phelps, Walker County to Point Blank, San Jacinto County;

**Gaines**—13.204 mi. grading, draining, Highway 137, Andrews County line to Seminole, S-P 936-E, Unit 1, \$30,000;

**McLennan**—3.612 mi. grading, draining, Highway 2, Falls County line north to point north of Bruceville, FAP 614-B, Unit 1;

**Live Oak**—13.031 mi. caliche base course, Highway 66, point 6 mi. south of George West to Jim Wells County line, \$37,000;

**Gonzales**—12.57 mi. 3/10 gal. bitum. seal coat, Highway 3, between Waelder and Gonzales, M-13-E-4, \$11,300;

**Burleson**—3.5 mi. grading, draining, Highway 21, end of Brazos River bridge south-west;

**Denton**—steel, conc. underpass under T. & P. Ry., Highway 40, Denton, \$10,000;

**Guadalupe**—reflooring, scraping and painting bridge over Guadalupe River, Highway 123 south of Seguin, M-13-L-4, \$31,000;

**Calhoun**—oil treatment and embankment protection on approaches to Lavaca Bay bridge, Highway 57, M-13-M-4, \$64,000;

**Denton**—bridge improvements include replacing 40-ft. structure, Highway 40, near north line Denton County; 180-ft. structure, Highway 10, between Denton and Fort Worth, and 300-ft. structure, Highway 40, north of Denton; struc. steel I-beams and conc. floor structures, \$25,600; 2 conc., steel underpasses, both Highway 10, under T. & P. Ry., near Denton, \$20,000, and near Aubrey, \$12,000;

**Dallas**—redecking 148-ft. bridge over Relief Slough of Ter Mile Creek, Highway 14, near Ellis County line, M-18-A-3, \$26,000;

**Gonzales**—12 mi. bitum. surface treatment, Highway 29, between Gonzales and Caldwell County line, M-13-E-4, \$17,200;

**Milam**—10.0 mi. widening ditches, shoulders and lengthening culverts, replacing conc. dip with timber structure, widening 2 narrow bridges and resurfacing, \$53,300;

**Kendall**—steel, conc. bridge, 22-ft. roadway, Highway 9, over Guadalupe River, FAP 631-B, \$130,000;

**Lamar-Delta**—high water, conc., timber, steel bridge over North Sulphur River, Highway 24, connecting Lamar and Delta counties;

**Houston**—17 mi. grading, draining, Highway 21, 8.5 mi. east of Crockett to Neches River;

**Cass**—9 mi. bitum. surfacing, Highway 47, between Linden and Atlanta, M-1-M-6, \$20,700;

**Dallas**—7 mi. bitum. seal coat, Highway 14, Hutchins to Ellis County line, M-18-A-3, \$5,300; 8 mi. bitum. seal coat, Highway 40, near Farmers Branch, M-18-X-2, \$6,200;

**Ellis**—bitum. surface, Highway 34, north of Midlothian, M-18-V-2, \$9,300;

**Fannin**—3.469 mi. conc. (water cement ratio) Highway 5, Bonham to 3.6 mi. east, \$56,600;

**Ward**—7.288 mi. 3/10 gal. per sq. yd. seal coat, Highway 82, Monahans to Winkler county line, \$71,000.

**Tex., Lubbock**—City Comsn. ordered paving of 4 blocks, Ave. H.

**Tex., San Antonio**—Bexar County, W. A. Wurzbach, Judge, opens bids soon for paving: Somerset road, Mantion Ave., Catalina Ave.,

Cincinnati Ave., Edwards and Macdona-Lacoste road, W. W. White road, and certain roads in Precinct No. 3.

**Tex., San Antonio**—City Comsn. rejected bids for improving Devine road. 3-3

**Va., Richmond**—State Dept. of Highways, C. S. Mullen, Ch. Engr., has low bid from Mexican Petroleum Corp., Brooklyn, Baltimore, Md., for furnishing 8,465,000 gal. bitum. surfacing material, and from Standard Oil Co. of New Jersey, 26 Broadway, New York, for 3,982,000 gal., at \$513,402 (combined bids); from Sam E. Finley, Hampton Ave., Virginia Heights, Roanoke, at \$30,44, for applying materials in Bristol, Staunton, Fredericksburg, Lynchburg and Richmond districts; from Southern Asphalt Co., North Boulevard and Ellen St., Richmond, at \$6734, for applying material in Suffolk district.

#### Contracts Awarded

**D. C., Washington**—Architect of the Capitol, David Lynn, let contract to Cranford Co., Inc., 3056 K St., N. W., for conc. pavement on terraces to west approaches to U. S. Capitol Bldg.; Item 1, \$12,520; Alt. 1, \$1800; 2, \$218; 3, \$9110. 2-18

**La., Sulphur**—Town, Mayor and Town Council, let contract to Monroe Construction Co., Monroe, for 9200 sq. yd. pavement, Huntington Ave., at \$1.80 per sq. yd. 3-10

**Mississippi**—State Highway Comsn., C. M. Williamson, Dir., Jackson, let contract to Cobb Bros. Construction Co., Citizens Bank Bldg., Meridian, for 2,064 mi., Meridian-Livingston (Ala.) road, Lauderdale County, section of FAP 117-Reop. 3-10

**Okl., Tulsa**—Tulsa County Comsn. let contracts for paving: 1 mi. paving, E 31st St., Roy Tanner Paving Co., Tuloma Bldg., \$23,370; 1.8 mi. paving, 55th St., Highway Construction Co., Daniels Bldg., \$35,020.

**Tennessee**—State Dept. of Highways and Public Works, R. H. Baker, Commr., Nashville, let contract to T. E. Wolfe Construction Co., St. Augustine, Fla., at \$206,361, for 10 mi. fluxed limestone asphalt, Highway 11, between Marshall County line and Trinne, Williamson County.

**West Virginia**—State Road Comsn., Geo. E. White, Sec., Charleston, let following contracts: Approaches to Guano Creek culvert, grading and gravel surfacing, Putnam County, Mohican Construction Co., Charleston, \$8872; approaches to Conaway bridge, grading, draining and paving with crushed slag, Marion County, Ralph W. Fimple, Fairmont, \$9913. 3-10

#### Sewer Construction

**Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.**

**Ala., Birmingham**—City, reported, rejected bids for drainage work, Section 4 of Village Creek, extending from 10th St., E. Thomas to N. 16th St. 12-31

**Ark., Fort Smith**—City Comsn., reported, lay sewer extensions to serve parts of Hendricks Hills and Free Ferry Rd. District; H. S. Beck, City Engr.

**D. C., Washington**—Dist. Commrs. receive bids March 29 for 6104 ft. of sewer; information 427 Dist. Bldg.

**D. C., Washington**—Peter and A. J. Ellis, Inc., 1359 1/2 Pa. Ave., S. E., reported, have contract at \$32,665 for construction Weaver place storm water sewer and at \$8621 for replacement sewer in vicinity of M St. and 6 1/2 Place, N. W.

**D. C., Washington**—See Want Section—Bids Asked.

**Fla., Palm Beach**—Town, L. Trevette Lockwood, Mgr., reported, plans sewer improvements; soon let contract for pipe.

**Md., Baltimore**—City, Dept. of Public Works, Bureau of Sewers, bids March 30 for sewers, Sanitary Cont. 288.

**Md., Baltimore**—W. H. Thompson, Relay, reported, low bidder at \$30,000, for sewers, Storm Water Contr. No. 165. 3-10

**Md., Baltimore**—See Want Section—Bids Asked.

**Mo., St. Louis**—Bd. of Public Service receives bids March 29 for Rosedale Ave. Public Sewer, also for constructing Manchester Ave. Public Relief Sewer.

**Mo., St. Louis**—William A. Riley Construction Co., 621 Olive Bldg., reported, low bidder

at \$45,273, for branch sewer Taylor Ave. from Chouteau Ave. to Wabash tracks and east on Wabash right of way to Newstead Ave.; Martin & Reilly, low bidder, at \$36,294, for tunnel beneath Whittier St., Finney Ave. to Aldine Ave., and same contractor, at \$31,399, for sewer, Newstead Ave., Cook Ave. to Aldine Ave. 2-25

**N. C., Charlotte**—Carolina Concrete Pipe Co., Rozells Ferry Rd., reported, has contract for 124,000 ft. of sewer pipe from 8-in. to 15-in. in diam.; city will probably let contract to Charlotte Pipe and Foundry Co., Commercial Bldg., for cast iron pipe. 3-17

**Commercial Bldg., for cast iron pipe; Pomona Terra Cotta Co., Pomona, Greensboro, reported, low bidders on vit. clay pipe. 3-17**

**Okl., Oklahoma City**—Atchison, Topeka and Santa Fe Ry., H. W. Wagner, Ch. Engr., Eastern Lines, Topeka, Kans., reported, construct \$60,000 storm sewer down its right of way.

**Okl., Ponca City**—City, reported, plans sewer work in west part of city.

**Tex., Dallas**—City, F. N. Baldwin, Asst. City Engr., let following contracts for sewer work, approximate cost \$414,000: Open cut Dallas Branch, Carter & Humphreys, W. B. Carter, 7 N. Rockford, Tulsa, Okla., at \$90,000; Tunnel Section Dallas Branch, J. B. McCrary Co., Praetorian Bldg., Dallas, at \$70,000; Mill Creek Diversion to Turtle Creek, J. Lee and E. A. Vilbig, 2517 Aiken St., Dallas, at \$92,000; Dallas Branch, Orange and McKinney to Maple Ave., McKenzie Construction Co., 1100 W. Commerce St., at \$35,000; Peak's Branch from Pennsylvania, J. Lee and E. A. Vilbig, at \$107,000; Peakes Branch, Barry and Lindsley to Lindsley east of Fairview, Carter & Humphreys, W. B. Carter, at \$20,000. 3-10

**Va., Richmond**—Dept. of Public Works will soon ask for bids on constructing relief sewers in Floyd and Grove Aves. west of Meadow St., Cary St. between Ninth and 12th St.; later will call for bids for extension sewers in S. Richmond.

**Va., Richmond**—Henrico County, Julien Gunn, Circuit Court Judge, voted \$50,000 sewage disposal plant bonds of Sandston Sanitary Dist. No. 2. 2-18

**Va., Richmond**—R. G. Lassiter & Co., Page Trust Co. Bldg., Raleigh, N. C., reported, has contract at \$118,028 for constructing Bacon's Quarter branch sewer; Massey Building Supply Co., has contract at \$66,000 for supplying 35,000 bbls. standard cement and for liner plates at \$3147. 3-10

**W. Va., Moundsville**—City, J. J. Sammons, City Engr., and Marshall County, reported, plans sewer, Highland to Poplar Aves.

#### Telephones and Radio

**Alabama**—Alabama Public Service Comsn., Montgomery, approved purchase by Alabama Public Utilities Co., of telephone properties in Alabama of South-States Utilities Co., Inc.

**Fla., Titusville**—Dept. of Commerce, Washington, let following contracts for radio station, Frank Dean, Box 14, in charge: Construction of basement and tower footings, J. C. Rogers; T. I. O'Flanagan, electrical work; lumber, Morgan Lumber & Supply Co., furnishing mill work, East Coast Lumber & Supply Co.; plumbing, A. O. Clark; bids opened March 21 for erection of tower. 2-25

**La., New Orleans**—Rice & Staples, Const. Engrs., Hibernia Bank Bldg., let contract to Bessemer Galvanizing Works, Phoenix Bldg., Birmingham, Ala., for furnishing and erecting two 200-ft. steel radio towers with all accessories in connection with WWL radio receiving station, near Kenner for Loyola University. 3-10

**S. C., Greenville**—WFBC, Virgil V. Evans, Knoxville, Tenn., reported, applied to Federal Radio Comsn. for permission to remove station to Greenville.

**S. C., Spartanburg**—WSPA, Voice of South Carolina, reported, applied to Federal Radio Comsn. for permission to install automatic frequency control.

**Tex., Houston**—Southwestern Bell Telephone Co., Dallas, reported, expend \$650,000 in Houston for repairing property, replacing materials which have depreciated.

#### Textile Mills

**Ga., Columbus**—Williams Lumber Co., Columbus, reported, has contract for remodeling mill unit for Eagle-Phoenix Mills; new roof; millwork; metal doors; wiring; machinery layouts, etc.; work to start at once.

**Ga., Rossville**—Peerless Woolen Mills, Rossville, and 257 Fourth Ave., New York City, erecting, with company's forces, warehouse and processing plant; work to be

completed in 60 days; may not purchase at this time any additional equipment; some equipment to be transferred from main plant to new building. 2-25

Ky., Louisville—Alvis Hosiery Mills, capital \$25,000, incorporated; M. S. Schuster, 2023 Eastern Pkwy.

N. C., Clayton—Clayton Mills, Inc., capital \$100,000, incorporated; R. L. Huffness, Jr., Rocky Mount; McDonald Dixon, Clayton.

N. C., Newton—Fred Guerrant, Statesville, reported, acquired controlling interest in Fidelity Hosiery Mill Co.

N. C., Raleigh—C. B. Barbee, 612 N. Blount St., and Henry T. Hicks, 327 Hillsboro St., reported, acquired Raleigh Cotton Mills, Firwood Ave.

S. C., Chester—Potter & Shackelford, Inc., Greenville, erecting building for Eureka Cotton Mills. Following have sub contracts: Cast iron columns, American Cast Iron Pipe Co., Birmingham, Ala.; rein. steel, Southern G. P. Co., 263 Decatur St., S. E., Atlanta, Ga.; struc. steel, Virginia Bridge & Iron Co., Roanoke, Va.; roofing and sheet metal work, G. G. Ray & Co., 315 E. Fifth St., Charlotte, N. C.; brick, Merry Bros. Brick & Tile Co., Augusta, Ga.; creosoted plank, Taylor-Colquitt Co., Spartanburg, S. C.; treated timber and plank, Eppinger & Russell, Jacksonville, Fla.; grading, Joe Frazier, Chester; steel sash and doors, David Lupton Sons Co., Philadelphia, Pa.; toilet partitions, Atlanta Sheet Metal Works, 799 Marietta St., Atlanta, Ga.; J. E. Sirrine & Co., Engrs., 215 S. Main St., Greenville. 3-10

Tex., Texas City—Ludlow Sales Corp., 80 Federal St., Boston, Mass., and U. S. Natl. Bank Bldg., Galveston, reported, leased Texas City Terminal Railway Co.'s warehouse "C" on water front and will remodel; reported, will import jute from India and manufacture bags and bagging here; company is sales division of Ludlow Manufacturers' Associates, Boston, Mass.

## Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that Classification.

Ala., Tuscaloosa—City voted \$75,000 bonds for increased water supply; W. H. Nichol, City Engr. 2-18

Ark., Elaine—Harvey H. Thompson, Memphis, Tenn., reported, acquired Elaine light and power plant from Associated Utilities Co.; will operate as Elaine Utilities Co.; plan erecting \$10,000 ice plant.

Fla., Tampa—Orient Park Water Co. incorporated; R. E. Philpot, 205 Zack St.

Miss., Charleston—See Electric Light and Power.

Okla., Oklahoma City—City, Tom G. Banks, Supt. Water Dept., having plans prepared for extension to water system; 2 preliminary sedimentation tanks, 20x100x12 ft. in connection with ferric chloride treatment of domestic sewage; probably install sludge collector; plans ready in April or May; will probably construct with day labor. See Want Section—Machinery and Supplies.

Okla., Pawnee—City plans new water supply consisting of earth dam and conc. spillway and 8000 ft. of pipeline; \$200,000 available; plans being prepared and bids will be received April 18; W. R. Holway, and W. F. McMurtry, both 302 E. 18th St., Tulsa, Engrs. 3-17

Tex., Dallas—City, reported, expend \$50,000 for improving water system of South Dallas; install 50 fire hydrants and 10 miles of pipe from 6-in. to 16-in. diam.; later plan tying in South Dallas water distribution system with mains along Industrial Blvd. in Trinity Industrial Dist.

Va., Roanoke—Roanoke Water Works Co., Charles E. Moore, V. P., will submit to City Council report on water survey by Whitman, Requaardt & Smith, Baltimore Trust Bldg., Baltimore, Md.; program calls for expenditure of \$1,500,000 covering period of years; including in plans is additional source of water supply capable of supplying 25,000,000 gals. daily. 12-10

W. Va., Bluefield—Northfork Light and Water Co., reported, rebuild burned plant.

## Woodworking Plants

Ky., Paris—Bourbon Business Club, reported, endorsed proposition from furniture mfg. company for establishment of branch factory, contingent on sale of \$12,000 stock; Edw. H. Gorey, Albert Hinton, investigating committee.

Md., Baltimore—John M. Reisner & Sons, 620 Portland St., reported, erect coopeage plant Charles and Wells Sts.; brick; 1 story; 50x125 ft.; owner builds.

N. C., Plymouth—Zeb Vance Norman, reported, negotiating with company for establishing plant to manufacture furniture panels from poplar and gum wood.

Tenn., Chattanooga—Lookout Furniture Co. chartered; Alvin Ziegler, First Natl. Bk.

## FIRE DAMAGE

Ala., Birmingham—Residence, W. H. Kettig, 2747 Niazuma Ave.; loss \$65,000.

Ala., Huntsville—Apartment and business bldg.; J. S. Reed, owner.

Ala., Montgomery—Building Commerce St., occupied by Dixie Overall Co., owned by Williams Estate, J. M. Holt, Agt.; loss \$30,000.

Ala., Tuskegee—"Rough" shed of East Alabama Lumber Co.

Ark., Beebe—R. T. Rainey's cotton gin; loss \$20,000.

Ark., Huntington—Majestic Theatre, Mayor H. W. Jeffries, owner, loss \$18,000.

Ark., Little Rock—Warehouse, William C. Bulman Furniture Co., 219-23 W. 7th St., loss \$10,000.

Ark., Newport—Newport Cabinet Shop, Newport Fish Co.'s building.

Ark., Texarkana—Clark-Lynn Grain Co. Fla., Arcadia—Residence, A. T. Shelfer, loss \$20,000.

Fla., Kendall—Fruit packing house and 2 dwellings at Howard, Dixie Highway owned by Benson Packing Co.

Ga., Atlanta—Bethany Methodist Episcopal Church, South.

Ga., Cordele—Store, I. Perlis & Son; loss \$25,000.

Ga., Statesboro—Statesboro Dry Cleaning Co.'s plant in Andersonville.

Ky., Lynn Grove—Lynn Grove High and Grade School building, loss \$30,000.

Ky., Mayfield—Reynolds Cafe, loss \$9000.

Ky., Paducah—Allcock Apartments.

Ky., Russell—Store, W. H. Lucas, loss \$65,000.

Ky., Vico—Bryant's Garage, Mazer's Department Store, Vico Bakery, York's Store, Red Wing Cafe, Comb's Jewelry Store and Feltner Apartments, loss \$50,000.

La., Bossier City, Shreveport—Bossier Packing Co.'s plant on Shaw Plantation.

La., New Orleans—Luling Trading Co. and Hymel Service Station, Sidney Hymel, owner, loss \$35,000.

La., St. Francisville—Residence, Feltus and James Leake, Pecan Grove.

Md., Ashland—Residence, Mano Swartz, 120 W. Franklin St., Baltimore.

Md., Baltimore—Residence, Walter B. Swindell, 4906 Roland Ave.

Md., Baltimore—Continental Lacquer Corp.'s plant at 410 Conway St.; loss \$75,000.

Md., Baltimore—St. Agnes' Hospital, Sister Anna, Supt.

Md., Frederick—J. C. Penney Co. store; loss \$10,000 to \$12,000.

Miss., Clarksdale—Residence, Mrs. William H. Stovall, loss \$35,000.

Miss., Jackson—Building occupied by Capital City Auto Co.; loss \$100,000.

Miss., Meridian—L. W. Hancock Contractor plant.

Miss., Ocean Springs—Residence, Dr. O. L. Bailey, Iberville St., loss \$8,000.

Mo., Columbia—Anderson Drug Store, Rex

Barber Shop, Taylor Furniture and Music Co., loss \$35,000 to \$40,000.

Mo., Crocker—High School, Walter Whinrey, Principal, loss \$15,000.

Mo., Kansas City—Rochambeau Hotel, Ben C. Taylor, Webb City, Mo., owner, loss \$130,000.

Mo., St. Louis—Michael Singer Dry Goods Co., 1066-68 Hodiamont Ave.; loss \$10,000.

Mo., Webb City—Blake Theatre, loss \$60,000.

N. C., Aulander—High School, loss \$40,000.

N. C., Durham—V. S. Bryant Bldg., E. Main St.; loss \$10,000.

N. C., Elkin—John H. Brown, residence.

N. C., Hendersonville—M. M. Redden's home in Laurel Park; \$10,000.

N. C., Monroe—Business building, J. B. Shute, loss, \$15,000.

N. C., Winston-Salem—Stores, B. and O. Furniture Store, 1002 East Fifth St. and Pure Food Store, 1006 E. Fifth St., loss \$35,000.

Okla., Blackwell—Hangar at municipal airport; Max Fife, Commr. Public Property; Dwight Randall, City Clk.

Okla., Kingfisher—School, King College, C. H. Williams, Pres.

Okla., Smithville—Folson Academy, school dormitory, loss \$15,000.

S. C., Abbeville—School, Poplar Grove Negro School Building.

S. C., Cheraw—Residence, Charles F. Haley, Market St.

Tenn., Johnson City—School, Lamar Rural High School; loss \$20,000.

Tenn., Memphis—Store, American Pharmacy, Gallina Bldg., loss \$75,000.

Tenn., Memphis—Dan Sea Boiler Works, 1106-08 Kansas St.; loss \$76,000.

Tenn., Smyrna—High School, Prof. Roy Harris, Principal, loss \$65,000.

Tenn., Selmer—Purdy College, Purdy, Rev. C. M. Ralston, loss \$20,000.

Tex., Denison—Gentry Hat Shop and Garter Garage, loss \$10,000.

Tex., Houston—Dwelling, Mrs. A. L. Hunter, Smith and Capitol Sts.

Tex., Longview—Bazzell and Bazzell's garage; loss \$100,000.

Tex., Minden—School building, loss \$12,000.

Tex., Pampa—Refinery, owned by H. F. Wilcox Oil and Gas Co., Tulsa, Okla.

Tex., Taylor—Residence, Lloyd Payne; loss \$10,000.

Tex., Waco—Plant of Kelly-Bone Printing & Stationery Co.; loss \$15,000.

Va., Bedford—Filling station and garage of E. H. Atkinson, east of Raxton on Route 10.

Va., Grundy—Goodykoontz Drug Co. store, W. R. Perkins Jewelry Store, Vernon Smith Automobile agency and Mick-Or-Mack grocery; loss \$100,000.

Va., Radford—Radford Bottling Co.'s plant, A. Glesen, Propr.; loss \$10,000.

Va., Rileyville—Store, Hugh Wood Department Store, loss \$10,000.

Va., South Boston—Wiborn Hardware Co. and Singleton Lumber Co.

Va., Gate City—Residence, H. S. Kane.

W. Va., Bluefield—Pumping plant of Northfork Water Co., and transformer station of Appalachian Electric Power Co.; loss \$25,000.

W. Va., Charleston—St. Albert Hotel, Tom Farley, owner; loss \$50,000.

W. Va., Marlinton—Store, A. Kline; loss \$50,000.

W. Va., Salem—Gymnasium, Salem College, loss \$12,000.

W. Va., Wheeling—Auto Sales Co., Inc., 23 14th St.; loss \$200,000.

W. Va., Wheeling—Tipple, Wheeling Co. Mine; loss \$75,000.

# BUILDING NEWS

## BUILDINGS PROPOSED

### Churches

D. C., Georgetown, Washington—Christ Church, 31st and O Sts., N. W., reported, plans addition to parish house; 2-story, 26x55, brick, stone trim, slag and metal roof, steel and ornamental iron work, steam heat, electric wiring, plumbing, Smith & Edwards, 1717 Eye St., Archt.

La., Lockport—J. A. Haase, Jr., 916 Union St., New Orleans, low bidder, \$9678, rectory bldg., for Catholic Church, Rev. Joseph Bon-dreaux, pastor, 32x90, frame; Wm. R. Burk, Balter Bldg., New Orleans, Archt.

N. C., Charlotte—Mount Calvary Lutheran Church, Rev. F. L. Freking, Pastor, reported, plans new combination church and Sunday school building, Summit Ave. and W.



Trade St.; cost \$15,000.

S.C. Allendale—Church of the Holy Communion, Rev. John A. Pinckney, Pastor, reported, plans erection of rectory.

Tex., Dallas—Herbert M. Greene, Laroche and Dahl, Archt., Insurance Bldg., advises bids on Central Lutheran Church will not be called until middle of summer. 3-3

Tex., Houston—Richey Tabernacle has permit 2-story brick and concrete bldg., cost \$50,000. 2-18

### City and County

Mo., Jefferson City—City, Mayor Asel, reported, contemplates new fire station.

Tenn., Tazewell—Claiborne County Court, Boyd Fugate, member Bldg. Committee, plans courthouse and jail building, cost \$100,000; rein. conc., brick and tile construction, struct. steel; Baumann & Baumann, Archts., 813½ Market St., Knoxville, Tenn. 10-22

### Dwellings

Ala., Birmingham—Jas. H. Chapman, 7900 Second Ave., has low bid, F. R. Hoar, 416 N. 22nd St., for brick residence; cost about \$10,000; John H. Hancock, 1647 S. 12th St., Archt.

D. C., Washington—A. Seagren, Water at N St., S. W., has permit, 2-story stone and tile residence, 7520 Sixteenth St., N. W., cost \$20,000.

D. C., Washington—Fred W. Horton, 5516-30th Pl., N. W., has permit, two 2-story, brick stone, frame and stucco residences, 5808 and 5812 Thirty-second St., N. W., cost \$15,000.

D. C., Washington—North Washington Realty Co., Inc., 7900 Georgia Ave., Silver Spring, Md., has permit, 2-story brick residence, 1364 Locust Road, N. W., cost \$9,300.

D. C., Washington—James McClellan, 3221 Reservoir Rd., N. W., has permit, 2-story brick residence, 3400 Oliver St., N. W., cost \$10,000.

D. C., Washington—James C. Dunn, 27 Observatory Circle, opens bids March 31, additions and alteration to residence. Following estimating: R. W. Bolling, 1 Dupont Circle; Davis, Wick & Rosengarten, 1406 G St., F. L. Wagner & Co., 10 L St., S. E.; DeSibour Construction Co., 2009 R St.; J. H. deSibour, 1701 Connecticut Ave., Archt.

Fla., Miami—Robert H. Montgomery, 90 Broad St., New York, plans 2-story residence, garage and 2-story gardener's cottage, estimated cost \$18,000; rein. conc. block stucco construction, tile roof, tile and wood floors; Robert Fitch Smith, S. W. 27th Ave., Miami, Archt.

Ga., Atlanta—Brevard Williams, Norris Bldg., Atlanta, has low bid from T. C. Wesley & Son, Red Rock Bldg., Atlanta, \$13,498, for residence, Hadersham Way, 2-stories and basement, 1-story garage, conc. foundations, brick walls, conc. tile, stucco, stone, Ludowici tile roofing, Truscon or Lupton sash.

Ga., Atlanta—Mrs. G. Arthur Howell, 1826 Peachtree Rd., N. W., plans 2-story and basement residence, Paces Ferry Rd., cost \$30,000; 98x36; tile and stucco walls, tile roofing, hardwood and tile floors, misc. and ornamental iron and steel; approved plumbing, wiring and steamheating; Cooper & Cooper, Archts., Forsyth Bldg., Atlanta.

Ga., Atlanta—Maddox & Tisinger, Candler Bldg., erect residence Clifton Road, 1-story and basement, 8-rooms and 2 baths, comp. shingle roofing, hardwood and tile floors, hot air heat.

Md., McDonogh—McDonogh School, Major Lamborn, soon ready for bids for 2½-story, brick residence headmaster, Eben D. Finney, 806 St. George's Road, Baltimore, following estimating: Thomas Mullan, 3945 Greenmount Ave., C. K. Wells, 3538 Old York Road, L. L. Chambers, 36th and Roland Ave., Edw. A. Cullings, 692 Gladstone Ave., Cogswell Construction Co., 406 Park Ave., T. V. Morgan, 11 E. Fayette St., all Baltimore; W. H. Sands, Towson, Md. 3-3

N. C., Hendersonville—M. M. Redden rebuild residence in Laurel Park recently burned at \$10,000 loss.

Tex., Alamo—Carl Bretsett plans 2-story, nine room, clay tile faced with brick residence; R. Newell Waters, Weslaco, Archt.; W. E. Simpson & Co., Milam Bldg., San Antonio, Engrs. 2-25

### Government and State

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid, Arthur L. Smith & Co., 2539 Pennsylvania Ave., N. W., \$112,800, cafeteria, Department of Agriculture Extensible Bldg. 3-3

D. C., Washington—Chief, Bureau of Yards

and Docks, Navy Yard, opens bids April 6, astrophysical laboratory building, Naval Observatory, following estimating: H. W. Cord Co., 1003 K St., N. W.; Truscon Steel Co., Youngstown, Ohio; Bahen & Wright, 916 Rhode Island Ave., N. E.; Arthur L. Smith & Co., 2539 Pennsylvania Ave., N. W.; Fidelity Construction Co., 1214 Randolph St., N. E.; Industrial Engineering and Construction Co., 909 Minnesota Ave., S. E.; United Construction Co., Munsey Bldg., George E. Wyne, 2539 Pennsylvania Ave., N. W.; Lloyd Goode, Inc., Insurance Bldg., The Blackford D. C.; North Eastern Construction Co., 6 Co., 3906 11th St., N. W., all Washington; W. Madison St., Dietrich Bros., 220 E. Pleasant St., Consolidated Engineering Co., Inc., St. Paul and Franklin St., all Baltimore, Md.; Dondos Co., Inc., 7 S. Tennessee Ave., Atlantic City, N. J. 3-17

D. C., Washington—Architect of the Capitol, David Lynn, has low bid, General Electric Co., Schenectady, N. Y., \$162,000, electric substation equipment, House of Representatives Bldg.

### FIRM BIDDING

General contractors, sub-contractors, and suppliers of materials and equipment will help to restore stability and confidence to the construction industry by adhering to the practice of firm bidding. To those subscribing to this ethical principle of doing business, a general contractor has suggested that a label worded as below might be attached to all bids:

**IMPORTANT NOTICE  
THIS IS OUR ROCK BOTTOM  
BID. IT IS NOT PADDED  
AND WILL NOT STAND A  
CUT**

United action on the part of all interested in the welfare of the construction industry in adhering to sound business practices is a supreme need in view of the disorganized condition existing.

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids April 13, post office building, elevator plant, U. S. Post Office. 2-25

Fla., Fort Myers—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids Apr. 13, post office building except elevator and lighting fixtures; cost \$210,000. 9-3

Fla., Fort Myers—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids April 13, freight elevator Post Office Building. 9-3

Ga., Reidsville—Vivian Stanley, Chmn., Prison Farm Purchasing Comm., announced purchase of 6,935 acre tract in Tattall and Tombe Counties for new State Prison Farm site; William K. Meadow, Asst. Atty. Gen.

Ky., Ashland—Geo. Thompson & Sons Co., 30 N. LaSalle St., Chicago, Ill., low bidder, \$82,175, post office building. 2-18

La., Baton Rouge—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids April 12, elevator plant for U. S. Post Office. 3-10

La., New Orleans—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., reported, plans nearing completion and bids to be called April 1, 1-story, stone front and hollow tile post office substation building, cost \$12,000; Weiss, Dreyfuss & Selferth, Maison Blanche Bldg., Archts.

Miss., Cleveland—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, selected site for post office.

Tenn., Chattanooga—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids April 7 post office bldg. Following estimating: Thelrault Contracting Co., 534 E. Johnson St., Philadelphia, Pa.; Virginia Engineering Co., First Natl. Bank Bldg., Newport News, Va.; R. P. Farnsworth & Co., Maritime Bldg.; M. Gwin Construction Co., 3503 Fern St., both New Orleans,

La.; Ralph Sollitt & Sons Construction Co., 518 E. Sample St., South Bend, Ore.; Murch Bros. Construction Co., Railway Exchange Bldg., St. Louis, Mo.; Batson-Cook Co., West Point, Ga.; Grahn Construction Co., Red Rock Bldg.; Southern Ferro Concrete Co., 70 Ellis St., N. E.; J. S. McCauley, Bona Allen Bldg.; Griffen Construction Co., Spring St.; Smith-Pew Construction Co., Irwin St., all Atlanta, Ga.; Coath & Gass, 1109 S. State St.; C. A. Moses Construction Co., Midland Bldg.; B. W. Construction Co., 720 N. Wabash Ave.; Henry B. Ryan Co., 500 N. Dearborn St.; Great Lakes Construction Co., 333 N. Michigan Ave.; E. P. Strandberg Co., 232 E. Erie St.; W. E. O'Neil Construction Co., 308 Washington St.; Henry Ericsson Co., 228 N. La Salle St.; Paschen Bros., 33 N. La Salle St.; Samuel Olson & Co., 1234 N. Kostner Ave., all Chicago, Ill.; Kaiser-Ducett Co., Rialto Square Bldg., Joliet, Ill.; Frank Messer & Sons, Dixie Terminal Bldg.; Penker Construction Co., 1030 Summers St., both Cincinnati, O.; S. & W. Construction Co., Shrine Bldg., Memphis, Tenn.; National Construction Co., Tower Bldg.; Skinner & Garrett, 1719 Eye St., N. W.; United States Construction Co., Munsey Bldg., all Washington, D. C.; Pike & Cook Co., Libbey & Libbey Co., 244 Second Ave., S.; Phelps-Drake Co., Metropolitan Life Bldg., all Minneapolis, Minn.; Cherokee Building Material Co., 1011 Cross St.; Karl Q. Kirk, 520 McCallie Ave.; Mark K. Wilan Co., Power Bldg.; A. F. Hahn, Chamberlain Bldg.; Rogers & Leventhal, Box 173; Geo. Becking & Son, James Bldg., all Chattanooga, Tenn.; Deakman-Wells Co., 8 W. 40th St.; Wills, Taylor & Mafra, 303 W. 42nd St.; Arthur H. Kraft, 1560 Broadway; Thos. G. Sperling Co., 103 Park Ave., all New York; Algernon Blair, First Natl. Bank Bldg., Montgomery, Ala.; H. B. Nelson, Columbus, Ga.; Foster & Creighton Co., American Natl. Bk. Bldg., Nashville, Tenn.; James I. Barnes, Springfield, O.; Jas. C. Miller, Campbellsville, Va.; A. W. Kutsche & Co., 2111 Woodward Ave.; M. H. Sobel Co., First National Bank Bldg., both Detroit, Mich.; John Largura & Co., 3672 Adams St., Gary, Ind.; Gordon Walker, Rector Bldg., Little Rock, Ark.; English Bros., Lincoln Bldg., Champaign, Ill.; J. A. Jones Construction Co., Commercial Bank Bldg., Charlotte, N. C.; J. S. McCauley & Co., Bona Allen Bldg.; Grahn Construction Co., Red Rock Bldg.; Griffin Construction Co., 452 Spring St., N. W.; Southern Ferro Concrete Co., Atlanta Trust Co. Bldg., all Atlanta, Ga.; Worsham Bros., Medical Arts Bldg., Knoxville, Tenn.; United Construction Co., Washington, D. C.; Moyahan Construction Co., Indianapolis, Ind.; N. P. Severin Co., 222 N. Adams St., Chicago, Ill.; R. H. Hunt & Co., Archt., First Natl. Bank Bldg., Chattanooga, Robert S. Fiske, Const. Engr., 1421 Healey Bldg., Atlanta. 3-17

Tex., Fort Bliss—H. C. Paullin, Purchasing & Contracting Officer, Quartermaster Office, opens bids April 8, reroofing building 416 Ordinance Shops, interlocking steel plate.

Va., Norfolk—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids, April 11, foundation work, \$2,000,000 post office. 11-5

Va., Langley Field, Hampton—U. S. Army, Capt. Geo. H. Schumacher, Const. Quartermaster, opens bids April 7, construction gymnasium and theatre building, cost \$85,000.

Va., Richmond—City, Mayor J. Fulmer Bright, reported, will offer site for Virginia Art Museum; John Barton Payne recently contributed \$100,000 for museum.

W. Va., Elkins—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids April 8, furnishing and installing interior lighting fixtures, U. S. Post Office and Court House.

### Hospitals, Sanitoriums, Etc.

Ky., Louisville—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids April 12, passenger elevators for Marine Hospital. 3-17

Md., Perry Point—Veterans Administration, Room 764, Arlington Bldg., Washington, D. C., opens bids April 19, nurses quarters and attendants' quarters; excavating, roads, walks, grading, rein. conc., hollow tile, cast stone, slate stair treads, marble work, terrazo, floor and wall tile, rubber tile, linoleum floors, iron work, steel stairs, steel shelving and partitions, slate metal and built up roofing, roof ventilators, metal weatherstrips, insert screens, heating and ventilating, electrical work and outside work; George E. Ijams, Asst. Administrator. 3-11

### Hotels and Apartments

Fla., Miami Beach—Morris Alpert, 730 Pennsylvania Ave., and William Shaine, 826 Meridian Ave., plan two 2-story apartments, cost \$12,000 each; Wm. F. Brown, 653 Washington Ave., Archt.



## Miscellaneous

Fla., Tampa—Beecroft-Florida Studios, reported, leased Davis Island coliseum and will expend \$100,000 installing equipment and sound stages.

La., Madisonville—Mayor and Bd. of Aldermen open bids April 4, 2-story frame community club building. Following estimating: Wm. Wallace, Pere Marquette Bldg.; Herman J. Estrade, 7226 Washington Ave.; J. A. Haase, 916 Union St., all New Orleans; Anzalone Construction & Supply Co., Independence, La. 3-17

Md., Baltimore—Women's Club of Roland Park, Mrs. E. Asbury Davis, Chmn., Bldg. Comn., 305 Somerset Road, reported, plans 2-story frame addition and alteration to club house; cost \$10,000; Palmer & Lamdin, 513 N. Charles St., Baltimore, Archt. 3-17

Mo., Zebra—Bridgeside Manor Club, L. W. Jeffers, plans club building and developing grounds; Albert B. Fuller, Archt., 1012 Baltimore Ave.

N. C., Charlotte—Tanner's Delicatessen, 221 W. Track St., reported, plans expending \$10,000 to \$15,000 enlarging, remodeling and refurnishing restaurants.

Tex., Amarillo—Amarillo Country Club, U. N. Oliver, Pres., plans rebuilding club building recently destroyed by fire; Guy A. Garlander, 1016 First Bldg., Amarillo, Archt.

Va., Arlington—Army and Navy Country Club opens bids March 26, 1 or 2-story brick building. Following estimating: Davis, Wick, Rosengarten Co., 1406 G St., Washington, J. H. Coleman, J. W. Kilgore, both of Clarendon, Va.; Wm. H. Dayson, Herndon, Va.; T. N. De Lashmutt, Arlington, Va.; Reider Bldg., Corp., Oakcrest, Alexandria, Va.; A. H. Thelander, Clarendon, Va., Archt.

## Railways Stations, Sheds, Etc.

Okla., Oklahoma City—Atchison, Topeka and Santa Fe Railway, E. T. Harrison, Archt., Railway Exchange, 80 E. Jackson Blvd., Chicago, Ill., advises, station will cost \$250,000; 2-stories, 74x242 with 1-story antanex, gen. waiting rooms and lunch facilities; nex, 50x70 for baggage space, first floor second floor divided. 2-18

## Schools

D. C., Washington—Georgetown University, Dr. W. Coleman Nevils, plans constructing new recitation hall of arts and sciences; estimated cost \$500,000; Emile G. Perrot, Archt., 1211 Arch St., Philadelphia, Pa., 90x190, 5-stories.

Ga., Savannah—City, Bd. of Education, reported, plans building \$125,000 school building, 2-stories, rein. conc., hollow tile, Cletus W. Bergen & Associates, Archts., Liberty Bank & Trust Bldg., Savannah.

La., Maurepas—Livingston Parish School Bd. opens bids April 4, alterations, additions and improvements high school building. Following estimating: T. A. Pittman, Inc., Canal Bank Bldg., Caldwell Brothers, 816 Howard Ave., J. A. Haase, Jr., 916 Union St.; Wm. Wallace, Pere Marquette Bldg., all New Orleans; Anzalone Construction & Supply Co., Independence; R. L. Roland, Crowley; Wm. R. Burk, Archt., Balter Bldg., New Orleans. 2-25

La., New Orleans—Tulane University, Dr. A. B. Dinwiddie, Pres., reported, plans new gymnasium building, cost \$140,000; rein. conc., brick, tile, struct. steel constr., Armstrong & Koch, Archts., Audubon Bldg., New Orleans. 3-17

La., Shreveport—Judge S. C. Fullilove, reported announced plans for Caddo Colored Training School for negro children; Rev. E. S. Still, Bd. of Directors.

Md., Baltimore—City, Public Improvement Comn., H. J. Leimbach, City Hall, reported, plans ready for bids about April 15 for school building for white handicapped children, brick and stone; Mackenzie & Cross, Archts., Professional Bldg., Henry Massart, 328 N. Charles St., Struct. Engr.; Reeder, Elser & Akers, 916 N. Charles St., Mech. Engr. 2-25

Md., Brooklyn Park—Anne Arundel County School Comms., Geo. Fox, Sec., Annapolis, plan school; W. H. Emory, Jr., Baltimore Trust Bldg., and Buckler & Feinbagen, 325 N. Charles St., Baltimore, Archts.

Md., McDonogh—See Buildings Proposed—Dwellings. 3-3

Mo., Savannah—City, G. C. Sparks, Sec. School Bd., plans rebuilding school burned recently; Eckel & Aldrich, St. Joseph, Mo., Archts.; voted \$50,000 bonds. 3-3

N. C., Fayetteville—Building Comm., State Normal School, Fayetteville, opens bids Mar. 29, dormitory and training school building George R. Berryman, Archt., Raleigh, N. C.

Tenn., Selmer—C. N. Ralston, Supt. of

Education, rebuild Purdy high school, burned at \$20,000 loss.

Tex., Gladewater—Board of Education plans 2-story, 83x206, rein. conc. brick high school, cost \$125,000; plans voting soon on bonds; Voelcker & Dixon, 207 Perkins-Snyder Bldg., Wichita Falls, Archt.

Tex., Rosenberg—City plans school improvement; votes April 9 on \$25,000 bonds.

Va., Boonsboro—Bedford County School Board, J. W. Short, Treas., Sanford, N. C., plans school building, 65x105, cost \$10,000; wood floors, composition roofing, conc. foundation; R. W. Foss, Richmond, Va., Archt.

Va., Salem—Roanoke College, Chas. J. Smith, Pres., advises do not contemplate erection of science hall or laboratories this year.

Va., Woodstock—Madison School Dist., Shenandoah County plans improving school; votes March 30, \$15,000 bond issue.

W. Va., Parkersburg—Bd. of Education reported, plans building school Core road section

## Stores

Fla., Sarasota—Kress Stores, Inc., 114 5th Ave., New York, opens bids April 11, construction store building, steel frame, brick and tile walls, granite, brick and marble. Following estimating: Logan & Curran, Sarasota; Paul Smith Construction Co., Furqua & Green, both Haines City, Fla.; E. K. Apear, Daytona Beach; Logan Bros., 207 N. Willow Ave.; Chas. E. Lund & Associates, 610 Morgan St., both Tampa; Grahn Construction Co., Red Rock Bldg.; A. K. Adams & Co., 542 Plum St., N. W., both Atlanta, Ga.; A. E. Flaussan, Orlando, Fla.; Paul M. Bergmann, Sarasota; St. John Construction Co., 629 N. W. Seventh St., Miami; Johnson Construction Co., 512 N. Sixth St., Birmingham, Ala.; All States Construction Co., Inc., Bisbee Bldg., Jacksonville, Fla.

La., Monroe—H. T. Williams, Ch. of Construction, W. T. Grant Co., 1441 Broadway, New York, opens bids March 26, 1 and 2-story brick and limestone trim, semi-fireproof store building. Following estimating: Gervans F. Favrot, Balter Bldg., New Orleans; W. J. Quick, Lake Charles; L. A. Ellis, Frank Masling, J. R. White, all Monroe. Love & Barr, Archts., Monroe, La.

Md., Baltimore—The Hub department store,

Charles and Fayette Sts., reported, plans 4-story, brick, steel and concrete building, Smith & May, Baltimore Trust Bldg., Archts. 3-3

N. C., Charlotte—Myers Park Manor Development, W. D. Wilkinson, owner, plans starting soon store of \$600,000 development; W. W. Smith, Engr., 409 S. Caldwell St.; and M. R. Marsh, Archt., Bldrs. Bldg. 3-3

S. C., Greenville—Belk-Simpson Co., 102 S. Main St., has permit to expand store.

Tenn., Knoxville—Quality Service Store, C. C. Hawk, Sec., 1801 E. Magnolia Ave., will expend \$23,000 remodeling and improving stores.

Tex., Houston—J. Weingarten, Inc., 808 Prairie St., has permit 1-story conc. brick and stone building, 3612 N. Main St., cost \$65,000.

## Theatres

Ark., Pine Bluff—Malco Amusement Co., reported, plans installation \$10,000 new cooling system, Saenger theatre; Arthur R. Swanke, Mgr.

Ga., Atlanta—Loew Theatre interests, reported, expend \$250,000 remodeling Loew's Grand Theatre.

S. C., Anderson—G. H. Bailes, reported, plans building 2-story brick theatre; estimated cost \$40,000; to be operated by P. C. Osteen, Mgr., Egyptian Theatre; opens bids soon.

## Warehouses

Ga., Moultrie—Colquitt County Tobacco Warehouse Co., W. C. Vreen, Pres., received bids March 23 for warehouse to build on site formerly occupied by Farmers Warehouse; contain floor space 54,000 sq. ft.; following estimating: Huber Construction Co., W. J. Phippen, G. W. Milligan, all Moultrie; Brown and Adams, Tifton.

Miss., Clarksdale—Staple Cotton Association Building, King & Anderson, owners, reported, to be rebuilt; recently destroyed by fire at loss of \$15,000.

N. C., Charlotte—Union Storage and Warehouse Co., 1000 W. Morehead St., has permit 3-story brick and conc. warehouse, 1008 W. Morehead St., cost \$35,000; J. A. Jones Construction Co., Contr., Commercial Bank Bldg.; W. T. Dye, Archt., 1817 Ewing Ave.

## BUILDING CONTRACTS AWARDED

## Association and Fraternal

Okla., Bristow—American Legion Bldg., R. L. Jones, Owner, let contract \$20,000 building, R. L. Jones, L. C. Martin, Supt. of Construction.

## Bank and Office

La., Jennings—H. C. Garrett, and St. Germain-Nohe Lumber Co., Jeanerette, La., have contract, brick building for Judge E. Miller, at Plaquemine and State Sts.

Md., Baltimore—National Bank of Baltimore has permit two 1-story buildings, Hanover and Pratt Sts., 58x25 and 46x32, hot-water heat, cost \$8000; American Oil Co., American Bldg., Archt. and Bldr.

Okla., Oklahoma City—McMillian Construction Co., Enid, reported, has contract at \$125,000 6-story office building.

## Churches

Ala., Montgomery—Court St. Methodist Church, A. C. Davis, Chmn. Bldg. Comn., let following sub-contracts: Cement, Teague Hardware Co., 132 Commerce St.; sand and gravel, Roquemore Gravel Co., First Natl. Bank Bldg.; brick and tile, Jenkins Brick Co.; marble, Dagostin & Angelini Bros., Inc., 319 Monroe St.; roofing and sheet metal, Acme Roofing Co., 5 Lower Wetumpka Rd., all Montgomery; rubble stone, Crab Orchard Stone Co., Acklen Park, Nashville, Tenn.; cut stone, Christie Cut Stone Co., 2082 Elzey St., Memphis, Tenn.; structural steel, Decatur Iron & Steel Co., Decatur, Ala.; ornamental iron, Price-Evans Foundry Corp., Anderson Ave., Chattanooga, Tenn.; steel casement windows, Crittall Casement Window Co., 10951 Hern St., Detroit, Mich.; plastering, J. R. Green Plastering Co., Columbus, Ga.; millwork, McPhillips Mfg. Co., Mobile, Ala.; painting, William Wilson Co., Inc., Bona Allen Bldg., Atlanta, Ga.; plumbing, Penson Plumbing and Heating Co., Auburn, \$4888; wiring, Mosely Electric Co., Montgomery, \$2928. Batson-Cook Co., West Point, Ga., Gen. Contr. 1-28

Mo., St. Louis—H. B. Deal & Co., 5358 Cabanne St., has contract for Convent of the Blessed Sacrament Parish, 5621 Northland Ave., cost \$50,000; Rev. Patrick H. Bradley, supervising work; Aegeter & Bailey, Archts., Ry. Exch. Bldg.

Tex., San Antonio—W. H. Wolter, 1907 E. Commerce St., has gen. contract, \$68,200, St. John's Lutheran Church bldg., S. Presa and Nueva Sts.; 1 story with tower, 45x130, seating capacity 650; fireproof construction walls, oak and tile floors, plumbing and heating, Jud & Ormond, 703 N. Flores St., \$6045; electric, Martin Wright Electric Co., Navarro St., \$1052; L. D. Royer, Smith-Young Tower, Archt.; J. W. Beretta Engrs., Inc., 1203 National Bank of Commerce Bldg., Engrs. 2-18

## City and County

N. C., Raleigh—Holland Sound and Vision Co., 520 N. Spring St., Greensboro, N. C., has contract for furnishing and installing amplifying equipment City Memorial Auditorium; C. V. York Construction Co., Contr., Odd Fellows Bldg., Atwood & Weeks, Inc., Archts., Engrs., Odd Fellows Bldg., both Raleigh. 11-12

## Dwellings

D. C., Washington—Fred W. Hoton, 5619 38th Place, N.W., reported, plans 2-story dwelling, brick, frame and stucco, slate roof, hot water heat, cost \$15,000; F. G. Wilcox, 709 15th St., N.W., Archt.

Ga., Atlanta—W. B. Hardman, 431 Hardendord Ave., N. E., has contract for residence for Chas. T. Rand, 795 Myrtle St., N. E.; J. C. Wise, Archt., 161 Spring St., N. W.

Md., Brooklandville—Summer A. Parker, 381 Guilford Ave., let contract, \$35,000 residence, Tilghman V. Morgan, 10 E. Fayette St., Baltimore, plumbing, Wm. P. Smith, 2603 Greenmount Ave., Electric work, Snowman Electric Co., 514 St. Paul St. 2-18

Mo., Jefferson City—Schell and Schell, Contrs., are building residence for J. H. Cutten, Sunset Place; brick work, Jos. Schmidt,

Plumbing, H. A. Crow; wiring, E. J. Petry; lumber and materials, L. L. Ott Lumber Co.

S. C., Columbia—John C. Heslep, S. C. National Bank Bldg., Columbia, has contract, \$18,000, residence, Hagood Bostick, 2461 Forest Drive; 2-story and basement, colonial face brick, Georgian colonial type, 72x28½, asbestos shingle roof, hardwood floors, rein. conc. foundation; Harold Tatum, Kinard Bldg., Columbia, Archt.

Va., Martinsville—Dr. E. M. McDaniel let contract to T. B. Huskey, \$12,000, residence in Forest Park.

### Government and State

Ala., Montgomery—Algernon Blair, First National Bank Bldg., Montgomery, has contract, \$736,650, post office and federal court buildings; Virginia Bridge & Iron Co., Roanoke, Va., 1000 tons fabricated structural steel. 3-17

D. C., Washington—M. W. Cord, Inc., 1003 K St., N. W., Washington, has contract, \$74,347, two cottage dormitories, Industrial Home for Colored Children, Blue Plains, D. C. 3-17

D. C., Washington—John J. Morton Co., W. Morehead St., Charlotte, N. C., has contract, \$52,000, furnish stone U. S. Senate Building; George A. Fuller Construction Co., Gen. Contr., Munsey Bldg. 2-18

Ga., Atlanta—Freyn Bros., 3850 Michigan Ave., Detroit, Mich., low bidder, plumbing and heating post office building; Great Lakes Construction Co., 333 N. Michigan Ave., Chicago, Gen. Contr.; A. Ten Eyck Brown, Forstyth Bldg., Atlanta, Archt. 3-10

Okla., Norman—Following sub-contracts let on post office: Terra Cotta, North Eastern Terra Cotta Co., Denver, Colo.; Steel, Capitol Steel & Iron Co., 1726 Agnew St., and Concrete Engr. Co., Insurance Bldg., both Oklahoma City; ornamental and misc. iron and hollow metal, Weaver Ornamental Iron Works, 1707 Carter St., Dallas, Tex.; bronze, Newman Mfg. Co., Cleaneay St. & N. & W. Ry., Cincinnati, Ohio; cement, Dewey Portland Cement Co., Perrine Bldg., Oklahoma City; Christy-Dolph Construction Co., Construction Industries Bldg., Dallas, Tex., Gen. Contr. 2-18

Okla., Norman—Capitol Iron & Steel Co., 1726 Agnew St., Oklahoma City, Okla., and Concrete Engineering Co., Omaha, Nebr., have sub-contract for 100 tons shapes and bars, post office bldg.; Christy-Dolph Construction Co., Dallas, Tex., Gen. Contr. 2-18

Va., Hampton Roads, Norfolk—Chief, Bureau of Yards and Docks, Navy Yard, Washington, reported, let contract moving and relocating quarters, J. Allan Killian, Baltimore, Md., \$47,000. 2-25

Va., Hampton Roads, Norfolk—Following sub-contracts let on Administration Bldg., Naval Air Station: Piles, Raymond Concrete Pile Co., American Security Bldg., Washington, D. C.; rein. steel, Concrete Steel Co., 2539 Pennsylvania Ave., N. W., Washington, D. C.; cement, Lehigh Portland Cement Co., Allentown, Pa.; Roberts & Hagen, Inc., 1619 24th St., Norfolk; sand and gravel, Richmond Sand & Gravel Corp., 434 York St., Norfolk; brick, Sanford Brick & Tile Co., Sanford, N. C.; limestone, Reed-Powers Cut Stone Co., Bedford, Ind.; granite, Stone Mountain Granite Corp., Stone Mountain, Ga.; marble, tile & Terrazzo, Roanoke Marble & Granite Co., Inc., 750 Jeff St., Roanoke, Va.; mastic tile, W. Morton Northern & Co., Inc., Central Natl. Bank Bldg., Richmond; waterproofing, dampproofing and caulking, Guaranteed Waterproofing Co., The Prescott, Greensboro, N. C.; misc. and orna. iron and steel, structural steel, fire resisting doors, steel sash and screens, steel partitions, Hall-Hodges Co., Inc., Citizens Bank Bldg., roofing & sheet metal, Norfolk Sheet Metal Work, 415 W. 23rd St., both Norfolk; lumber, Weaver Bros., Inc., 2507 Warwick Ave., both Newport News; millwork, Portsmouth Lumber Corp., High St., Portsmouth; painting, Nestor, Inc.; glass and glazing, Bulloers Supply Co., both Norfolk, Va.; finishing hardware, Standard Wardware Corp., 603 Middle St., Portsmouth, Va.; Virginia Engineering Corp., First Natl. Bank Bldg., Newport News, Va., has gen. contr. 1-14

### Hospitals, Sanitoriums, Etc.

Ark., Hot Springs National Park—Laclede Steel Co., Arcade Bldg., St. Louis, Mo., has contract 950 tons conc. bars, superstructure, army and navy hospital; National Construction Co., Washington, Gen. Contr. 2-25

D. C., Washington—Zarin & Korman, Buildment, 7302-06 Georgia Ave., three 2-story brick, tin roof, hot water heat, cost \$25,000; Geo. T. Santmyers, Archt., 925 15th St., N. W. 2-18

Mo., Springfield—Garrett Construction Co.,

211½ E. Commercial St., has contract, \$24,000, to furnish crushed rock, for Nelson and Son, 2538 Lincoln Ave., Chicago, Ill., contractors for concrete and masonry work for Hospital for Defective Delinquents; brick, Lusco Brick & Stone Co., 402 N. Jefferson St., \$15,000; brick layer cement, Kelly Coal & Material Co., 550 N. Jefferson St., \$4500; hollow tile, Kelly Coal & Material Co., \$9000. Joseph A. Holpuch, 4010 W. Madison St., Chicago, Ill., Gen. Contr. 1-21

### Miscellaneous Construction

Mo., St. Louis—Rev. John J. Glennon has permit convent building, cost \$45,000; Aegerter & Bailey, Archt., Railway Exchange Bldg., H. B. Deal & Co., Inc., Contr.

### Schools

Ark., Lonoke—C. R. Carty, Riegler Bldg., Little Rock, has contract, \$18,875, erection 8 room grammar school building; John P. Almand, Boyle Bldg., Little Rock, Archt. 3-17

Md., Baltimore—E. Eyring & Son, 809 S. Conkling St., have contract school building, Sacred Heart Roman Catholic Church, Rev. John M. Beierschmidt, 600 S. Conkling St. Following sub-contracts let: Heating, William Helbach Heating Co., 2406 Alsquith St.; plumbing, Geo. L. Schubert, 2332 Frederick Ave.; electric work, Kingsbury Samuels, 530 N. Calvert St.; millwork, C. O. Wurzbarger & Sons, Annapolis Ave. W. Md. Ry.; sheet metal and roofing, Philip Carey Co., 1400 Moreland Ave.; setting out stone, Clough & Molloy, Harford Rd. and B. & O. tracks, all Baltimore. 3-3

Md., North East—Clarke Construction Co., American Trust Bldg., Baltimore, has contract building school, \$49,500. Following sub-contracts let: Stevens Excavating Co., Elkton; cut stone, Jas. O'Meara, Frisby & Belt Line R. R., Baltimore; steel work, Maryland Steel Products Co., Bush and Ridgely Sts.; roofing, Warren Ehret Co., 53 W. Oliver St.; painting, Eli L. M. Fishpaw, 11 N. Gilmer St. 3-10

Md., Salisbury—L. L. Chambers, 36th St. and Roland Ave., Baltimore, has contract, \$200,000 Salisbury Normal School; millwork, Jos. Thomas & Sons, 836 Leadenhall St.; steel work, Dietrich Bros., Pleasant and Davis Sts.; Smith & May, Archts., Baltimore Trust Bldg., both Baltimore.

Mo., Charleston—Lincoln School for Negroes under construction with aid from State Dept. of Public Schools; 1 story, 10 classrooms, auditorium and library; Johnson & Maack, 721 Olive St., St. Louis, Archts. 12-17

Tenn., Nashville—Davidson County Bd. of Education, let contract Central High School gymnasium, Cowan Lumber Co., \$16,499. 3-3

Tex., Austin—Virginia Bridge & Iron Co., Roanoke, Va., and Central Texas Iron Wks., Waco, Tex., have contract for 135 tons structural shapes, geology bldg. and dormitory, University of Texas; Christy-Dolph Construction Co., Dallas, Tex., Gen. Contr. 2-11

Tex., Littlefield—Contract has been let for \$25,000 brick school building to replace one burned by fire at Pep.

Tex., Longview—Longview Ind. School Dist. of Gregg County, let general contract, R. F. Ball Construction Co., Fort Worth, \$122,000, erection junior high school; plumbing, Gregg County Plumbing and Heating Co., Longview, \$9374, heating, L. R. Snyder & Co., 4526 Boyar St., Dallas, \$13,500; electrical, N. E. Busby & Co., 4004 Main St., Dallas, \$4529; Mark Lemmon, Archt., 1910 Tower Petroleum Bldg., Dallas. 3-3

Va., Richmond—University of Virginia let contract for Biology Building to A. F. Perrin, 221 W. Graham Road, Richmond; \$125,000, 3-story, brick and stone, 120x45; Charles M. Robinson, Times Dispatch Bldg., Archt., Richmond. 1-21

Va., Bedford—J. W. Stout Co., Inc., Sanford, N. C., has contract for school at Boonsboro.

Va., Remington—H. C. Moring, Farmville, Va., has contract building John Barton Payne School; plumbing, Wade-Richardson, Marshall, Va. 1-14

Va., Tazewell—Tazewell County, A. S. Grever, Supt., let contract, J. Clarence Heldreth, Tazewell, \$76,000, 2-story, brick or brick and cinder block building; 172x116, conc. foundation; wood on conc. floors; Johns-Mansville built up or equivalent roofing; furnishings and equipment cost \$5000; Leon Bishop, State Bd. of Education, Richmond, Va., Archt. 3-10

### Stores

Ga., Valdosta—W. T. Grant Co., 1441 Broadway, New York, reported, plans store on Patterson St.

Ga., Waycross—First National Bank let contract to A. S. Johnson, remodeling Phoenix bldg. for drug store.

Tex., San Antonio—H. H. Mayben, 509 Denver Blvd., has contract, Handy Andy Store building, Camden & Lexington Sts., 1-story with foundation for future additional stories; 36x90, brick and rein. conc., plate glass front, tile inserts; Martin Wright Electric Co., Navarro St. at Auditorium, has electric wiring contract.

Tex., Sherman—Knight Furniture Co., J. B. Knight, let contract L. W. Wentzel, Contr., \$19,230, for store; brick and wood with stone trimmings; John Tulloch, Archt. 2-25

### Theatres

N. C., Durham—Erwin West Construction Co., Statesville, N. C., has contract to repair building on Church St. for moving picture theatre for Criterion Amusement Co., O. R. Blackley Co. has contract for plumbing and Durham Electric Construction Co., contract for electric fixtures, both Durham; approximate cost \$30,000; Benton & Benton, Archts., Wilson. 3-3

### Warehouses

Md., Baltimore—Lacchi Construction Co., 1818 Munsey Bldg., has contract, \$50,000, Baltimore Wholesale Grocery Corp., B. T. Banghart, Pres., 12134 E. Falls Ave., brick and conc., 2 and 4 stories, 94x95, J. Herbert Stahl, 3920 Ridgewood Ave., steel, Dietrich Bros., Pleasant & Davis Sts. 3-17

### Trade Literature

**Quick-Acting Steel Couplings.**—The Cleveland Rock Drill Co., Cleveland, Ohio, has issued a folder illustrating and describing a snap-on hose coupling made of bar steel cadmium plated to prevent rust, and known as the Cleveland Type "Q" Cadmium Plated Steel Coupling.

**Concentration Hydrometer.**—A circular issued by the Dearborn Chemical Company, Chicago, is devoted to the Dearborn Concentration Hydrometer for testing in one operation boiler water samples and providing "a more rapid and convenient method for the determination of total dissolved solids."

**Air-Conditioning in Home.**—Every home owner may now have complete mastery of indoor conditions regardless of the temperature on the outside, according to the Holland Institute of Thermology, Holland, Mich. Leaflets on air-conditioning in the home have been prepared by the Institute and may be had upon request.

**Handling Raw Materials.**—The Diamond Rubber Company, Inc., Akron, Ohio, is distributing a booklet showing various applications of the belt conveyor in handling raw materials, parts and packages, in some 27 different industries. That the use of the belt conveyor is a thoroughly modern practice, because of efficiency and economy, is interestingly told and attractively illustrated by the booklet. The company manufactures conveyor belting for any particular service.

**Self-Cooled Motor Fans.**—The Ilg Electric Ventilating Co., Chicago, has issued an attractive catalog devoted to the Ilg Self-Cooled Motor Propeller Fans for air-conditioning purposes. With a patented Ilg self-cooled motor, and protected from dust and moisture by an enclosing metal cap, the Ilg fan may easily be mounted in wall or window at small expense. The company is also distributing leaflets on the Ilg-Kold Ice Cooler and the Ilg Attic Ventilator.



# WANT SECTION

## THE CLASSIFICATIONS IN THIS SECTION ARE:

### Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

### Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

### Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

*Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.*

### Machinery and Supplies

**Fertilizer Mixing Machinery.**—Charles Northen, Box 1411, Tampa, Fla.—Wants prices and data on used fertilizer mixing machinery.

**Mechanical Sludge Collector.**—T. G. Banks, Supt. Water Dept., Oklahoma City, Okla.—Wants mechanical sludge collector.

L. E. Sullivan, 405 W. McBee Ave., Greenville, S. C.—Wants prices and data from manufacturers of:

- (1) Cigarette Manufacturing Machinery
- (2) Plug Tobacco Manufacturing Machinery
- (3) Smoking Tobacco Manufacturing Machinery.

Sweetwater Ice & Fuel Co., M. H. Thompson, Pres., Sweetwater, Tenn.—Wants data and prices on following:

- (1) Air System (Low Pressure)—complete, except the blower
- (2) Ice Machine—30 ton capacity with motor and condensers.

### Miscellaneous

**Insect Screen Moulding (Metal).**—W. J. Beaman, Greensboro, N. C.—Wants prices and data from firms in position to furnish knock down metal screen frames in stock lengths; to be assembled and finished in Beaman's shop.

**Pipe and Couplings.**—State Highway Comsn., W. Z. Betts, Pur. Agt., Raleigh, N. C.—Wants prices and data on 4-in. galv. flanged union coupling, 44 l. f. 4-in. diam. galv. steel pipe, threaded with couplings, 4-in. galv. flanged union coupling, 44 l. f. 4-in. diam. galv. steel pipe, threaded with couplings; 60 l. f. 3½-in. I. D. galv. steel pipe threaded with couplings.

**Tear Gas Bombs, Shells, etc.**—J. Hod Williams, 713 Franklin St., Tampa, Fla.—Wants prices and data on tear gas bombs, shells and supplies.

J. D. Elliott, Edenton, N. C.—Wants prices and data from manufacturers on:

- (1) Iron Rings—galvanized, 4 to 10-in. diam., of ¼ or 5/16 in. metal (round)
- (2) Seine Corks—such as are used on various kinds of fish nets.

S. B. W. Maay, 317 N. Westlake Ave., Los Angeles, Calif.—Wants prices and data from manufacturers on:

- (1) Cosmetics Manufacturing Machinery
- (2) Hair Preparation Manufacturing Machinery, etc.

### Building Material and Equipment

Bedford County School Bd., Bedford, Va., wants prices on following for school at Boonsboro, Va.:

- Floors—hardwood
- Roof—flat and built-up
- Steel Sash and Trim.

Cross Construction Co., W. M. Cross, 504 Beacon Life Bldg., Tulsa, Okla., erecting garage, wants following:

- Cement
- Plumbing
- Tile Roofing
- Tile (Metal Enameled)—for bath room walls.

Hagood Bostick, 2461 Forest Drive, Columbia, S. C., wants prices on following for \$18,000 residence:

- Electric Refrigerators
- Floors—hardwood
- Rolling Partitions
- Roof—asbestos shingle
- Vaults—rein. conc.

### Bids Asked

**Alarm Clocks.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Mar. 30 for 400 alarm clocks, delivery Philadelphia, Pa.

**Automobiles.**—Dist. Comms., Dist. Bldg., Washington, D. C.—Bids Mar. 28 for 2 police patrol automobiles, body and chassis complete.

**Auto Top Material.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 4 for 500 yd. auto top material, delivery Philadelphia, Pa.

**Bicycles.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 1 for 100 bicycles, delivery Philadelphia, Pa.

**Braid.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 4 for 5300 yd. braid, delivery Philadelphia, Pa.

**Bridges.**—State of Oklahoma, 2 bridges. See Construction News—Roads, Streets and Paving.

**Bridge.**—Magnolia, Miss. See Construction News—Bridges, Culverts and Viaducts.

**Bridge.**—Charleston, Miss. See Construction News—Bridges, Culverts and Viaducts.

**Bridges.**—Tylertown, Miss. See Construction News—Bridges, Culverts and Viaducts.

**Bridges.**—Columbus, Miss. See Construction News—Bridges, Culverts and Viaducts.

**Bridge Lumber and Piling.**—Pearl River County Supvrs., H. K. Rouse, Clk., Poplarville, Miss.—Bids Apr. 4 for furnishing standard bridge lumber, long leaf yellow pine or white oak, 85 per cent heart; creosoted bridge piling, treated to 12-lb. pressure, and creosoted bridge lumber, treated to 12-lb. pressure.

**Bridge.**—Tennessee. See Construction News—Roads, Streets and Paving.

**Buses.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 1 for 2 buses, delivery f. o. b. contractor's factory.

**Copies of Drawings.**—Dept. of Commerce, U. S. Patent Office, Washington, D. C.—Bids April 4 for producing, during fiscal year ending June 30, 1933, by planographing, or other process, copies of drawings of weekly issues of patents, to be assembled with specifications, stitched, banded, numbered, etc., and for reproduction of exhausted copies of drawings, specifications, etc., by planographing, to be assembled, stitched, banded and numbered.

**Distribution Boxes.**—Constructing Quartermaster, Barksdale Field, Shreveport, La.—Bids Mar. 31 for distribution boxes.

**Electric Welding Outfit.**—Panama Canal, Office Gen. Pur. Agt., Washington, D. C.—Bids March 29 for electric welding outfit, Sch. 2739.

**Electrical Supplies.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Mar. 30 for electrical supplies, delivery Quantico, Va.

**Electric Plant.**—See Water Works and Electric plant.

**Fasteners.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 4 for 2000 hookless slide fasteners, delivery Philadelphia, Pa.

**Fire Fighting Equipment.**—Procurement Div., Veterans' Administration, Washington, D. C.—Bids Mar. 28 for 4 wall ladders, 16 fire dept. lanterns, 12 combination hose spanner fire hydrant wrenches, 6 pike poles, 2 life saving nets and 4-play pipes.

**Fourrageres.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 4 for 2000 wool fourrageres, delivery Philadelphia, Pa.

**Hardware.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Mar. 28 for hardware, delivery Quantico, Va.

**Kitchen Equipment.**—Constructing Quartermaster, Fort Sam Houston, San Antonio, Tex.—Bids Mar. 30 for installing kitchen equipment in bachelor officers' quarters; plans \$5.

**Leather (Russet).**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 8 for 1000 sq. ft. russet leather, delivery Philadelphia, Pa.

**Levee.**—Arkansas. See Construction News Miscellaneous Construction.

**Levee.**—Mississippi. See Construction News—Roads, Streets and Paving.

**Locomotive Steel Tires.**—Roanoke, Va. See Construction News—Railways.

**Lumber and Piling.**—George County Supvrs., M. L. Malone, Clk., Lucedale, Miss.—Bids Apr. 4 for creosoted lumber and piling.

**Milking System.**—Dist. Comms., Dist. Bldg., Washington, D. C.—Bids Mar. 31 for 3-unit magnetic combine milking system for home for aged and infirm.

**Miscellaneous Hardware.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 1 for miscellaneous hardware, delivery Quantico, Va.

**Miscellaneous Hardware, etc.**—Quartermaster, Marine Corps, Washington, D. C.—Bids Mar. 28 for nuts, screws, fence wire, steel wire cloth, galv. steel poultry netting, staples, nails, cabinet locks, bolts, sandpaper, building paper, dust respirators, screen wire, glass cutters, glass board, etc.

**Miscellaneous Office Supplies.**—Pur. Agt., Post Office Dept., Washington, D. C.—April 12 for wide variety of office supplies for fiscal year 1933.

**Motor Trucks.**—Supt., St. Elizabeth's Hospital, Washington, D. C.—Bids March 28 for 1½-ton stake body truck, wheel base not less than 131 in.; also, 1½-ton stake body truck, chassis weight stripped not less than 2800 lb.; also, panel body truck, capacity not less than 1200 lb. pay lead.

**Motor Truck.**—Bd. of Awards, Office of City Register, City Hall, Baltimore, Md.—Bids Mar. 30 for motor truck for Dept. of Education; Joshua R. Jolly, Act. Sec., Bd. of School Comms.

**Motor Truck.**—Bd. of Awards, Office of City Register, City Hall, Baltimore, Md.—Bids Mar. 30 for furnishing motor truck for Dept. of Education; Joshua R. Jolly, Act. Sec., Bd. of School Comms.; blanks \$1.00.

**Oils.**—Pur. Agt., Post Office Dept., Washington, D. C.—Bids Mar. 30 for lubricating oil for motor trucks.

**Paint Spraying Outfit.**—Marine Corps, Quartermaster Dept., Washington—Bids Mar. 30 for paint spraying outfit, delivery Quantico, Va.; Sch. 698.

**Paper.**—Treasury Dept., Bureau of Engraving and Printing, Washington, D. C.—Bids Apr. 28 for check paper, postage stamp paper and internal revenue paper, during fiscal year beginning July 1, 1932.

**Photo Prints.**—Dept. of Commerce, Patent Office, T. E. Robertson, Commr., Washington, D. C.—Bids April 4 for copies of drawings of pending applications and patents, trademark applies and of foreign patent papers and exhibits by photographic or other process, fiscal year ending June 30, 1933.

**Pianos.**—Bd. of Awards, Office of City Register, City Hall, Baltimore, Md.—Bids Apr. 6 for pianos for Dept. of Education; Joshua R. Jolly, Act. Sec., Bd. of School Comms.

**Pipe (Vitrified).**—See Sewer Construction.

**Pipe (Concrete).**—See Sewer Construction.

**Planographing, Half-tone, and Color Process Photoengraving.**—Dept. of Commerce, Patent Office, T. E. Robertson, Commr., Washington, D. C.—Bids April 4 for producing during fiscal year ending June 30, 1933, by planographing or other process, copies of drawings of weekly issues of patents and for reproduction of exhausted copies of drawings and specifications.

**Power Cable and Iron Castings.**—Pur. Agt., Sewerage and Water Bd., Room 502, No. 526 Carondelet St., New Orleans, La.—Bids Mar. 28 for power cable and iron castings for suction of 14-ft. screw pumps.

**Pumps and Tanks.**—Marmet, W. Va. See Construction News—Miscellaneous Construction.

**Pump and Tank.**—U. S. Engr. Office, Huntington, W. Va.—Bids Mar. 28 for pump and tank.

**Plumbing Supplies.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids March 28 for plumbing supplies, delivery Quantico, Va.

**Refrigerators.**—Procurement Div., Veterans' Administration, Washington, D. C.—Bids April 5 for utility room refrigerators as required during 6 or 12 months period.



**Roads.**—State of Maryland, 4 roads. See Construction News—Roads, Streets and Paving.

**Road.**—Baltimore, Md. See Construction News—Roads, Streets and Paving.

**Road Oil.**—Irvine H. Skinner, Street Commr., Ferguson, Mo.—Bids Apr. 18 for supplying and applying about 30,000 gal. road oil on streets.

**Road.**—Tennessee. See Construction News—Roads, Streets and Paving.

**Roads.**—State of Oklahoma, 3 roads. See Construction News—Roads, Streets and Paving.

**Sand and Gravel Pump.**—U. S. Engr. Office, 1006 McCall Bldg., Memphis, Tenn.—Bids Mar. 31 for 15-in. sand and gravel pump.

**Screen Guards.**—Bd. of Supvrs. of Hinds County, W. W. Downing, Jackson, Miss.—Bids April 6 for 30 or more heavy screen guards for jail windows.

**Screens.**—Constructing Quartermaster, Munitions Bldg., Washington, D. C.—Bids Mar. 30 for installing screens on new quarters, Fort Myer, Va.

**Screening.**—Constructing Quartermaster, Langley Field, Hampton, Va.—Bids Apr. 4 for constructing and installing window and door screens and screening porches of 20 double non-commissioned officers' quarters; plans \$5.

**Sewer Construction.**—Bd. of Awards, Baltimore, Md., care of City Register—Bids March 29 for building sanitary sewers and storm water drains in sewer districts H-8, H-9, H-11 and H-12, Sanitary Contract No. 288, under funds allotted by Public Improvement Comsn.; work includes rect. rein. conc. drain, vit. pipe drain, vit. sewer pipe, 16,6100 sq. ft. vit. clay liner plates; plans \$5.

**Shoes.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 15 for 36,000 pairs shoes, delivery Philadelphia, Pa.

**Stationery Supplies.**—Pur. Agt., Post Office Dept., Washington, D. C.—Bids Apr. 12 for wide variety of stationery supplies, etc., for fiscal year 1933.

**Streets.**—Baltimore, Md. See Construction News—Roads, Streets and Paving.

**Streets.**—St. Louis, Mo. See Construction News—Roads, Streets and Paving.

**Sewer Construction.**—Dist. Commrs., Washington, D. C.—Bids March 29 for constructing 6104 ft. of sewer from 10-in. to 6 ft. in diam.; information on application Room 427 Dist. Bldg.

**Speed Boat.**—U. S. Coast Guard Headquarters, Washington, D. C.—Bids Mar. 28 for stock speed boat, 26 ft. overall, 6 to 7-ft. beam, 24-in. draft, runabout type.

**Tanks (Gasoline).**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Apr. 1 for 2 gasoline tanks, delivery Philadelphia, Pa.

**Towboats.**—Inland Waterways Corp., 1016 Munitions Bldg., Washington, D. C.—Bids Apr. 18 for 2 100-h. p., shallow draft, twin screw Diesel towboats; \$25 deposit for plans, etc.

**Tractor.**—War Dept., Fredericksburg & Spotsylvania County Battlefields Memorial Comsn., Fredericksburg, Va.—Bids Mar. 31 for tractor.

**Tractor.**—Lafayette Parish Police Jury, George Crouchet, Sec., Lafayette, La.—Bids Apr. 8 for Allis Chalmers "35" crawler tractor, with top and full equipment, delivery Ridge, La.

**Valves and Pipe Fittings.**—U. S. Engr. Office, Huntington, W. Va.—Bids March 29 for valves and pipe fittings.

**Varnish and Thinner.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Mar. 28 for 1060 gal. varnish and 530 gal. thinner, delivery Quantico, Va.

**Water Works.**—City of Pawnee, Okla.—Bids April 18 for water supply system consisting of earthen dam and conc. spillway and 5000 ft. of pipe line; \$200,000 available; W. R. Holway and W. F. McMurry, Engrs., both 302 E. 18th St., Tulsa.

**Well.**—Quartermaster Corps, Reno Q. M. Depot (remount), Fort Reno, Okla.—Bids April 11 for well, approx. 40 ft. deep.

**Wires, etc.**—U. S. Engr. Office, Memphis, Tenn.—Bids Apr. 1 for 200,000 squares non-corrosive reinforcing fabric, 5,000,000 ft. non-corrosive permanent anchoring wires, 4,000,000 non-corrosive bracket assembly clips, 600,000 non-corrosive end loop assembly clips, 12 tools for placing bracket assembly clips and 6 tools for placing end loop assembly clips.

**Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.**—Bids until dates indicated and delivery as indicated:

**Cable.**—electric, insulated, various east coast points, Mar. 29

**Bolts and Nuts.**—steel; also, lag screws,

various east and west coast points, Apr. 5

**Ferro-Manganese.**—25,000 lb., Norfolk, Va., Mar. 29

**Oil Burners and Pump.**—and control equipment, Puget Sound, Wash., Apr. 5

**Capacitors.**—various east and west coast points, Apr. 5

**Cable.**—cord and wire, insulated, various east and west coast points, Apr. 5

**Iron.**—foundry, pig, Norfolk, 224 tons, Mar. 29

**Crucibles.**—100, Portsmouth, N. H., Mar. 29

**Cable.**—radio, antenna, single, Model J, 300,000 ft., Philadelphia, Pa., Mar. 29

**Optical Strain Gages.**—and autocollimator, Washington, D. C., Mar. 29

**Wax.**—ceresin and carnauba, Mare Island, Calif., New York and San Francisco, Apr. 5

**CO<sub>2</sub> Gas.**—east and west coast points, Apr. 5

**Ethyl Chloride.**—east and west coast points, Apr. 5

**Compressed Oxygen Gas.**—east and west coast points, Apr. 5

**Pump.**—centrifugal, motor driven, Newport, R. I., Mar. 29

**Hot Water Bottles.**—2304, Brooklyn, N. Y., Mar. 29

**Tiles.**—floor and base, Norfolk, Mar. 29

**Forgings.**—copper nickel alloy, Washington, Mar. 29

**Surgical Beds.**—64, Chelsea, Mass., Mar. 22

**Tractor.**—gasoline driven, Washington, Mar. 29

**Air Motors.**—New York, Mar. 29

**Washing Machines.**—2, New York, or San Francisco, Apr. 5

**Chassis.**—motor truck, with mounted fueling unit, New York, Mar. 29

**Air purifying.**—cooling and recirculating, and spare parts, east and west coast points, Apr. 5

**Air Purifying and Oxygen Liquefying Plant.**—Bellevue, D. C., Mar. 29

**Cotton Tape.**—surface, pre-doped, Philadelphia, Pa., Apr. 5

Div. of Purchase, Sales and Traffic, Dept. of Agriculture, Washington, D. C.—Bids until dates for following, delivery as indicated:

**Graders.**—4 leaning-wheel, and 2 multiple-blade maintainers, Fort Logan, Mar. 29

**Level Rods and Wood-Ranging Poles.**—48 level rods, 48 poles, Fort Logan, Apr. 1

**Automobile.**—roadster, Fort Worth, Mar. 29

**Automobile Truck.**—Portland, Ore., Mar. 29

**Rotary Scrapers.**—2, Ft. Logan, Mar. 29

Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids until dates indicated and delivery indicated for:

**Couplings.**—universal, double center, 100, Norfolk, Va., Apr. 5

**Acetylene Gas.**—various east and west coast points, Apr. 5

**Cloth.**—enameled, black, 9000 yd., Mare Island, Calif., Apr. 5

**Waterproofed Paper.**—11,000 sheets, Mare Island, Apr. 5

**Lumber.**—box and crate, 100,000 ft., Mare Island, Apr. 12

**Furnaces and Tempering Pot (Electric).**—various east and west coast points, Apr. 5

**Boiler Tubes.**—steel, New York, N. Y., and Philadelphia, Pa., Apr. 5

**Gyros.**—directional, aircraft, 50, Philadelphia, Pa., Apr. 5

**Barium Nitrate.**—11,000 lb., Baldwin, L. I., N. Y., Apr. 5

**Steel Forgings.**—Mare Island, Apr. 5

**Bolts and Nuts.**—brass and steel, various east and west coast points, Apr. 5

**Pumps.**—hydraulic, Portsmouth, N. H., Apr. 5

**Redwood.**—Mare Island, Apr. 12

**Hardness Testing Machine.**—Munhall, Pa., Mar. 29

**Motor Trucks.**—various east and west coast points, Apr. 5

**Pipe and Tubing.**—brass and copper, Portsmouth, N. H., and Mare Island, Apr. 5

**Toweling.**—crash, cotton, bleached, 56,500 yd., Brooklyn, N. Y., Apr. 5

**Mortising Machine.**—motor driven, San Diego, Calif., Apr. 15

**Wood Felt.**—136 yd., Baldwin, L. I., N. Y., Apr. 5

**Pipe Threading and Cutting Machine.**—New York, and San Francisco, Mar. 29

**Lathe.**—screw cutting, back geared, precision type, motor driven, 2, Mare Island, Apr. 5

**Light Fixtures.**—and receptacles, Philadelphia, Pa., Apr. 12

**Gloves.**—leather, various east and west coast points, Apr. 12

**Toweling.**—bleaches, 10,000 yd., Mare Island, Calif., Apr. 12

**Paint Brushes.**—various east and west coast points, Apr. 12

**Motors, Controllers and Spare Parts.**—Washington, D. C., Apr. 12; also, same for Mare Island, Apr. 19

**Steel—bar and strip.**—Baldwin, L. I., N. Y., Apr. 5

**Airship Cloth.**—2000 yd., Baldwin, L. I., N. Y., Apr. 5

**Millboard.**—asbestos—east and west coast points, Apr. 5

**Laundry Equipment.**—Hampton Roads, Va., Mar. 29

**Lumber.**—Mare Island, Apr. 12

**Thread.**—cotton, sewing, cotton tape, linen corn, Baldwin, L. I., N. Y., Apr. 5

**Aircraft Compasses.**—75, Washington, D. C., Apr. 12

**Cable.**—insulated, Norfolk, Apr. 5

**Navigational Watches.**—and spare parts, Washington, D. C., Apr. 12

**Fire Extinguisher Units.**—2, Lakehurst, N. J., Apr. 5

**Drilling and Tapping Machines.**—upright, motor driven, Philadelphia, Apr. 5

**Water-Cooled Mill.**—belt driven, Philadelphia, Apr. 5

**Rain-Clothes.**—Brooklyn, N. Y., Apr. 12

**Valves, Relays.**—and spare parts, Mare Island, Apr. 12

Panama Canal, Office Gen. Pur. Officer, Washington, D. C.—Bids Apr. 1 for following, Sch. 2740:

**Brass or bronze pipe fittings, iron pipe elbows, copper-covered steel tubing, railing fittings, diestocks and dies, pressure and vacuum gages, maze glass metal valves, throttle valves, Bibb cokes, corporation cocks, asbestos gaskets, untarred jute, sheet rubber packing, etc.**

## INDUSTRIAL NEWS

### Joins Byers Machine Distributor

The Byers Machine Company, Ravenna, Ohio, manufacturers of shovels and cranes, announce that D. D. Barnes, formerly sales manager for Smith Engineering Works, Milwaukee, has joined the sales staff of their Greater New York distributors, the H. O. Penn Machinery Company, 140th street and East River.

### First Railroad-Radio Broadcasting

Radio broadcasting of a regular program of entertainment from a rapidly moving railroad train will be undertaken Sunday night, March 27, from 9.00 to 9.30 P. M., Eastern standard time, by the Columbia Broadcasting System. The improvised studio will be a dining car of a Baltimore and Ohio Railroad train running between Washington and New York. Kitchen and pantry will house a short wave transmitter and control board.

### Gears and Forgings Distributors

Gears and Forgings, Inc., Cleveland, Ohio, announce the appointment of Carey Machinery & Supply Company, Baltimore, Md., as distributors of G & F Speed Reducers and Falk Flexible Couplings. The G & F line includes planetary, worm and herringbone types in proper ranges. Factories of Gears and Forgings, Inc., are located at Cleveland, Ford City, Pa., and Chicago.

### Louisville Firm Plans Canada Branch

The Wood Mosaic Company, Ltd., Louisville, Ky., one of the largest manufacturers of veneers and plywoods in the world, it is said, will open a branch in Woodstock, Ontario. In addition to veneers and plywood, the plant will produce hardwood flooring, wall paneling, mosaic flooring and house trimmings.

#### Hanson Clutch Distributors

The Hanson Clutch & Machinery Co., Tiffin, Ohio, engineers, founders and machinists, have added the following firms to their distributor organization: Raleigh Tractor & Equipment Co., Raleigh, N. C.; Nixon-Hasselle Co., Chattanooga, Tenn.; Earnest Bros., Richmond, Va.; General Equipment Co., Clarksburg, W. Va.; Henry A. Petter Supply Co., Paducah, Ky.; John D. Turner Co., Birmingham, Ala.; Joe Lyons Machinery Co., Little Rock, Ark.; Western Material Co., Sioux Falls, S. D.; Dow-Potter Co., Buffalo, N. Y., and C. A. Lippincott & Co., Moores-town, N. J.

#### Orschel With Serviced Products

H. M. Orschel, formerly with Johns-Manville Corporation and other concerns, has joined the Serviced Products Corporation, Chicago, as field sales manager. He has traveled extensively through this country and Canada as general sales manager for the Mohawk Heater Company and as field sales manager for the Aeroil Burner Company. Mr. Orschel also opened and managed the Chicago district office and warehouse for Littleford Brothers, his associations bringing him into intimate contact with Federal, state, county and city road officials, as well as with equipment manufacturers and distributors, and road building contractors.

#### Employee Suggestion Awards

The General Electric Company, Schenectady, N. Y., has presented awards to 22 of its employees in recognition of constructive ideas. These awards, made under the Charles A. Coffin Foundation established by the company in 1922 as a tribute to its first president, went to 12 factory employees, 8 engineers and 2 salesmen. Four winning suggestions had to do with the manufacture of electric refrigerators and four others were concerned with electric welding in various applications in General Electric plants. Three engineers at the Pittsfield, Mass., works were cited jointly for development of a new substance known as Thyrite, which is said to have the remarkable characteristic of being a good electrical insulator at low voltages and an excellent electrical conductor at high voltages.

#### Sullivan Machinery Distributor

The Sullivan Machinery Company, Chicago, announces the appointment of the C. H. Arnold Company, Inc., Park Building, Pittsburgh, as distributor of contractors' and municipal equipment in the Pittsburgh district. A complete stock of Sullivan air compressors, rock drills, concrete breakers, clay spaders, portable hoists, drill sharpeners, and their parts will be carried in the Arnold warehouse at Sharpsburg, Pa., and in the Sullivan company's service station at the Pittsburgh Terminal Warehouse.

#### Billings Assistant General Manager

The Four Wheel Drive Auto Company, Clintonville, Wis., manufacturers of FWD trucks, announce the appointment of Guy H. Billings as assistant general manager. Mr. Billings has served as purchasing agent for 17 years, and will retain this title in his new position.

#### Lime Plant Has No Mishap

The Stephens City, Virginia, plant of the M. J. Grove Lime Company, Lime Kiln, Md., operated during 1931 with no lost-time accident, according to a report to the Industrial Commission of Virginia.

#### Simplified Practice Recommendation

A proposed modification of simplified practice recommendation No. 57 on wrought-iron and wrought-steel pipe, valves and fittings, by eliminating the 3½-inch nominal inside diameter pipe from Table 3, "Double Extra-Strong Pipe," has been mailed by the Bureau of Standards, Department of Commerce, Washington, to all interests in the industry for consideration and written approval.

**The Mountain Empire.**—Under the foregoing title, Southwestern Virginia, Inc., Wytheville, Va., a regional chamber of commerce, has issued the initial number of a magazine devoted to the interests of Southwest Virginia. The publication was designed and printed by the Stone Printing and Manufacturing Co., Roanoke, and F. B. Kegley, historian and writer of Southwest Virginia, is associate editor.

**Directory of Contractors.**—A new Directory of Contractors, containing a list of those who have filed performance records with the Bureau of Contract Information, Inc., 437 Munsey Bldg., Washington, has been completed and is now available.

#### National Metal Trades Association to Meet

The National Metal Trades Association will hold its thirty-fourth annual convention at the Commodore Hotel in New York on April 20. Delegates to the convention, for the most part, are principals in industry who either own or are directly charged with the responsibility for successful operation.

Principal subjects to be presented at the convention includes: The Destiny of Our Major Industries; Status of Credit and Recent Financial Developments; Unemployment Insurance; Recent Legislation and Legislative Tendencies; Necessity for Drastic Reduction in National and Local Government Expenses; Significance of the Sino-Japanese Conflict; Recent Developments in Rackets and Radicalism; Labor Management in the Future.

The association's committee on Industrial Relations has just released its analysis and report on unemployment insurance.

#### \$436,000 Baltimore Gas Holder

Plans are being made by the Gas & Electric Company, Baltimore, for the early construction of a large gas holder in Jones Valley, south of Cold Spring lane, application for permit having been filed with the Building Department of the city. The holder will be 229 feet high, 218 feet in diameter, with a capacity of 7,000,000 cubic feet of gas. It will cost \$436,000. The Bartlett Hayward Company, Baltimore, will fabricate and erect the structure.

#### \$7,275,000 INDUSTRIAL INVESTMENT

##### 145 New Plants Locate in Norfolk and Western Area

Roanoke, Va.—According to a report by T. Gilbert Wood, industrial and agricultural agent of the Norfolk & Western Railway Company, 145 new industries and additions to existing plants were established in territory traversed by the company's lines during 1931. It is estimated that these plants involved an investment of \$7,275,000 and provided employment for 4315 workers. In the number of plants established and plant additions, the 1931 record is only three less than that of 1930. Many of the plants are running on capacity schedules, it is said, and some are on a 24-hour basis.

A total of 105 farms was purchased by people settling in the territory served by the railroad, at a cost of \$744,000, showing an increase of 60 per cent over the number purchased and occupied in 1930. The report also shows that more than \$14,000,000 was expended for municipal improvements and other construction in towns of the territory, while Federal expenditures in the Norfolk district alone amounted to upward of \$13,000,000.

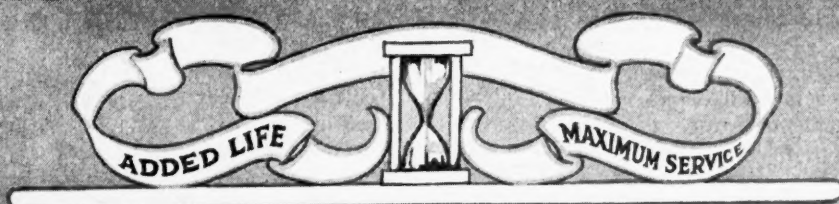
#### \$1,650,000 Hospital Bids

The Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, opens bids April 15 for the construction of a new U. S. Marine Hospital in Baltimore, for which an appropriation of \$1,650,000 was made. Initial construction, to cost about \$1,250,000, will include a main building, powerhouse, laundry and garage. Plans call for Colonial architecture. The hospital will have accommodations for upward of 400 beds.

#### \$855,000 Dallas Contracts

Dallas, Tex.—In ten months since it assumed office, the present city administration has awarded contracts for public works amounting to more than \$855,000, exclusive of waterworks improvements and upward of \$100,000 worth of other work done, according to a memorandum from the public works department to John N. Edy, city manager. The largest part of contracts awarded involved the construction of storm sewers at a cost of more than \$436,000. Contracts aggregating another \$1,000,000 are expected to be awarded within the next sixty days, with additional funds to be expended on sanitary sewers, to be done by welfare labor.





## LIFETIME STRENGTH

*Permits Use of Smaller Poles*

Carrying telephone wires and also supporting a trolley wire, these tall, straight A & L Creosoted Pine Poles are more than equal to their burden.

They have lifetime strength, being carefully selected, properly seasoned and scientifically treated under pressure with pure Creosote Oil the full length of the pole.

*Smaller Size A & L Creosoted Pine Poles can be used with safety because they retain their full strength*

No. 27

# AYER & LORD TIE CO.

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TREATING PLANTS

Carbondale, Ill. Grenada, Miss. North Little Rock, Ark. Louisville, Ky. Montgomery, Ala.

**CREOSOTE OIL PREVENTS DECAY**



### Open-Shop Conference

The forthcoming American-Plan Open-Shop Conference, to be held April 4-5, at Minneapolis, is expected to attract a number of nationally known authorities who will give consideration to important problems of legislation and industrial relations. The program includes the following:

Reports on the present status of the open shop in leading communities; public building construction under the Davis-Bacon bill; significance of present Federal legislation, including such topics as anti-injunction bills, unemployment insurance and old age pensions; a forecast of State legislation in 1933 as it affects industrial relations; court rulings on the minimum wage and hand labor; how to create and maintain open shop sentiment among industrial executives and public school officials, in schools, in churches and in the press; political advertising and the union label; wages and the open shop. There will be a round table discussion on the financial and administrative problems of association executives, also on the problem of unifying America's open shop forces.

Discussion will follow each formal presentation of subject matter. A. C. Rees is chairman of the conference, with headquarters in the Kearns Building, Salt Lake City.

### Annual Meet of National Association State Chambers of Commerce

State Chambers of Commerce throughout the country have been invited by Julien H. Hill, Richmond banker and president of the Virginia State Chamber of Commerce as well as president of the National Association of State Chambers of Commerce, to be represented at the annual conference of the National organization in Richmond, April 25-28. The annual conference of Governors of the United States will be held in Richmond at the same time.

### Radio Receiving Sets for Airplanes

Ship No. 9716 of the American Airways is the first plane on the Southern transcontinental route to be equipped with a long wave radio set and earphones at each seat, and is believed to be the first in the United States to afford such facilities for air passengers. Heretofore, it is pointed out, the rapid flight of the airplane increased or decreased the volume from local stations, the powerful engines set up interference, and the two-way radio telephones from ship to ground stations all combined to make

long range radio receiving sets in planes operate unsatisfactorily. Development of automatic volume control on radio sets, the shielding of the magneto and electrical devices to prevent interference, and solving numerous technical problems by the radio department of the American Airways made good reception possible, except during the regular intervals when the pilot is reporting his position by radio-telephone to ground stations. The set installed in ship 9716 is a 9-tube R.C.A. Victor automobile type radio, placed in the front cockpit, with controls in the passenger cabin and plugs at each seat where headphones are connected. It has a day range of 500 miles and a night range of 1500 miles.

So satisfactory have been results on the first plane so equipped, it is announced, that other ships of the line will be fitted with radio receiving sets at the first regular overhaul period.

### Textile School Adds Equipment

Atlanta, Ga.—The Textile School of the Georgia School of Technology has installed new equipment in two departments which will materially widen the scope of work being done by students. A new jacquard head from Thomas Halton's Sons, Philadelphia, Pa., of the 1300-hook, fine index, single cylinder type, has been received by the Weaving Department, while the Dyeing Department recently installed two dye vats lined with monel metal; these are said to be particularly useful for dyeing rayon and other synthetic fibers in the form of skeins.

### \$2,000,000 Post Office Bids

Norfolk, Va.—Bids for the construction of foundations for a new \$2,000,000 Federal building here to house the post office, courthouse, custom house, etc., will be opened April 1 in the office of Jas. A. Wetmore, Acting Supervising Architect, Treasury Department, Washington. With York street closed to make room for the building, the structure will cover two blocks bounded by Granby street, Monticello avenue, Duke street and Brambleton avenue. Benjamin F. Mitchell and Rudolph, Cooke & Van Leeuwen, both of Norfolk, are associated architects.

By proper use of published information much useless research can be saved. Recently a certain manufacturer believed he had a new process, wanted it developed. Examination of published literature showed that it was developed and patented in four countries nearly 25 years ago.—*Chemical Digest*, Foster D. Snell, Inc., Brooklyn, N. Y.

### \$193,000 Canal Lock Contract

The Hardie-Tynes Manufacturing Co., Birmingham, Ala., has been formally awarded contract by the War Department, through the District Engineer, First New Orleans District, for furnishing machinery, equipment and materials, including the setting and erecting of gates and gate operating machinery for the Harvey (La.) Lock project, being constructed in the Louisiana and Texas Intracoastal Waterway. The contract comprises approximately 1,000,000 pounds of structural steel, over 1,200,000 pounds of machinery, iron and steel castings, forgings, electrical equipment, electric wiring, etc., and involves the expenditure of \$193,775.

C. F. Lytle, Sioux City, Iowa, was awarded contract early in 1931 for the foundation and lock walls, the contract covering the clearing of the site, constructing sheet pile cofferdam, excavation, driving foundation piling and sheet pile cut-off walls, constructing concrete lock walls and floors, including reinforcing steel, and constructing a temporary open-deck timber pile trestle under the railroad tracks. This contract was let on a bid of \$686,217.

### Birmingham Employment Campaign

"Full steam ahead" was the signal given last week by leaders in the Employment and Improvement Campaign and reinforcements were added to make the campaign an outstanding success, reports the Birmingham Chamber of Commerce.

North Birmingham and the Western District were organized under able leadership of men in each community, and three employment offices are now in operation.

Division meetings were called and new enthusiasm put into the workers, emphasizing the necessity for doing work that will create jobs for the unemployed. All posts of the American Legion are co-operating in the movement.

At the time this is written, the largest single pledge was turned in by Joe Spain, working under the captaincy of George A. Mattison, Jr., in the division under the chairmanship of J. B. Riggan. This single pledge was for \$55,000 worth of work to be done within the next 90 days. Second in line was W. A. Currie with a pledge of \$40,000.

Under the co-chairmanship of Joe Rowell, representing the Chamber of Commerce, and John D. Hill, representing Post No. 1, American Legion, the workers are determined that no less than \$1,000,000 shall be pledged, it is announced.

## WORLD'S LARGEST WATER DEVELOPERS

LAYNE & BOWLER, Inc.,  
Memphis, Tenn.

Send facts about how Layne Pumps—Well  
Water Systems can lower water cost in  
our ☐ City ☐ Plant

Name .....

Address .....



## “C'est Impossible M'sieu!”

The Compagnie Lyonnaise des Eaux—holders of the water concessions for all France—called for bids on mammoth new wells, to be drilled in the suburbs of Paris.

Engineers from Great Britain, Germany, France and America answered.

“How long will it take?” asked the Compagnie.

“About three years,” replied the French.

“Eighteen months,” said the British and German.

Layne Hydrological experts spoke.

“Not more than 90 days! Perhaps not that long.”

As far as their rivals were concerned, the Layne men might as well have said they intended to work a miracle.

“Three months? Why, that is impossible.”

But Layne started to drill. Their drills bit into the earth. Down—down—down they went—five hundred—a thousand—fifteen hundred—two thousand feet—and into water—a tremendous supply—3,000,000 gallons per day per well.

And again Layne scored in its long and unparalleled, world-wide record of success, as the world's largest water developers.



“How Layne cuts the cost of water” is a story which will interest every municipal and industrial official. It is free. Write for it.

# LAYNE PUMPS & WELL WATER SYSTEMS

LAYNE & BOWLER, INC. • MEMPHIS, TENN.



# FINANCIAL NEWS

## Bond Issues Proposed

Ala., Mobile—Mobile County, E. C. Doody, Clk., Bd. of Revenue & Road Commrs., offer \$240,000 4½% paving bonds at private sale within 30 days; former bids rejected.

Ala., Tuscaloosa—City voted \$75,000 waterworks bonds. 2-18

Ky., Frankfort—State House of Representatives passed bill providing for issuance of bonds by State of Kentucky, Ruby Laffoon, Governor, to fund over a 20-year period its floating debt of about \$14,000,000; already passed by Senate; now goes to Governor, who is expected to approve it.

Ky., Fulton—City, Office City Clk., opens bids Mar. 28 for \$25,000 waterworks bonds.

Ky., McKee—Jackson County, Office of County Clk., reported, opens bids April 12 for \$20,000 debt funding bonds.

Mo., Savannah—City voted \$50,000 school rebuilding bonds. 3-3

N. C., Roanoke Rapids—Roanoke Rapids Sanitary Dist., reported, has \$365,000 water and sewer bonds ready for sale. 2-4

Tenn., Bristol—City, Commr. of Finance, opens bids Mar. 29 for \$20,000 waterworks bonds.

Tenn., Memphis—City, D. C. Miller, Clk., reported, opens bids April 6 for \$600,000, 6% refunding bonds.

Tex., Longview—Gregg County voted \$1,500,000 road bonds. 2-25

Tex., Rosenberg—City votes April 9 on \$25,000 bonds for school improvement.

Va., Blacksburg—Town, F. W. Eheart, Mayor, opens bids Apr. 8 for \$35,000, 6% \$1000 denom. waterworks bonds.

Va., Richmond—Henrico County, Julien Gunn, Circuit Court Judge, voted \$50,000 sewage disposal plant bonds of Sandston Sanitary Dist. No. 2. 2-18

Va., Woodstock—Madison School Dist. of Shenandoah County votes Mar. 30 on \$15,000 building bonds.

W. Va., Charleston—Kanawha County Court plans offering \$70,000 bonds; \$60,000, Point Creek road; \$10,000, Field's Creek road.

## Bond Issues Sold

Ala., Anniston—Calhoun County, J. D. Henry, Chmn., sold \$13,000, 6% court house bonds to J. Mills Thornton, Montgomery, at 98. 2-25

Ky., Louisville—City, Commrs. of Sewerage, sold \$500,000, 4½% sewer bonds to Almsdt Bros. at par; purchasers also took option on \$1,500,000 additional bonds on same terms.

La., Baton Rouge—State Highway Comsn., A. P. Tugwell, Chmn., Baton Rouge, reported, sold \$15,000,000 to \$35,000,000 bonds to Pyramid Securities Co., Inc., affiliate of Union Indemnity Co., New Orleans; bid provides that entire \$15,000,000 will be paid to Comsn. in cash, Comsn. having privilege of withdrawing \$12,000,000 immediately; following named as depositors for keeping remaining \$3,000,000: Hibernia Bank & Trust Co., Interstate Trust & Banking Co., Whitney National Bank, Canal Bank & Trust Co., and American Bank & Trust Co., all New Orleans; remainder shall remain on deposit for reasonable length of time upon terms and with legal security satisfactory to Comsn.

Md., Annapolis—Anne Arundel County Commrs. sold \$400,000, 6% notes to Union Trust Co. of Maryland, Baltimore.

## New Financial Corporations

Ark., Lake Village—Lake Village Finance Corp., capital \$10,000, chartered; B. C. Clark, D. F. Galloway.

Mo., Clinton—Union State Bank being formed with Emory Hurt, Pres., and H. G. McDowell, Cashier.

Exchange Bank, J. C. Leer, Pres., Millersburg, Ky., and Farmers' Bank, W. T. McIntyre, Pres., Millersburg, merged as Farmers-Exchange Bank; officers of merged institution include W. D. McIntyre, Chmn. of Bd.; John F. McDaniel, Pres., and C. D. Linley, Cashier.

## Financial Notes

### Western Electric Report

Net profit on sales of the Western Electric Company, Inc., New York, for the year ended December 31, 1931, was \$9,268,626, according to the annual report of the company. Sales for the year amounted to \$228,955,524, and cost of sales to \$219,686,898. With other net income amounting to \$6,288,987, net earnings available for interest and dividends amounted to \$15,557,613. Net earnings available for dividends were \$10,816,387, while dividends paid, at the rate of \$1.75 per share on common stock outstanding during the year, amounted to \$10,500,000, leaving a balance, carried to surplus, of \$316,387.

### Georgia Power and Light Report

The consolidated report for 1931 of the Georgia Power & Light Company, Valdosta, Ga., operating unit of National Electric Power Company, New York, shows net income applicable to preferred and common dividends of \$106,625 after all charges. This compares with \$137,503 for 1930. Gross earnings were \$1,040,692 for 1931 compared with \$1,133,435 for 1930, and operating expenses \$734,642 for 1931, as compared with \$806,750 for the previous year.

### Westinghouse Electric and Manufacturing

Sales billed by the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., and subsidiaries, for 1931 were \$115,393,082, compared with \$180,283,579 for 1930, according to the company's annual report. Orders received totaled \$128,014,820, a decrease of \$42,295,447 from 1930. Because of certain orders for large equipment, notably electric locomotives for the Pennsylvania Railroad, the value of unfilled orders

on hand December 31, 1931, was \$40,024,390, compared with \$40,208,181 at the end of 1930. Operations for the year resulted in a loss of \$3,655,659. This compares with a net income for 1930 of \$11,881,705. The report states that plant and equipment have been maintained in first-class operating condition during the year and that the average number of employees on the payroll in 1931 was 31,276, compared with 43,827 in 1930. Payrolls amounted to \$55,980,470 in 1931, compared with \$81,921,432 in 1930. Registered stockholders at the end of 1931 numbered 53,079, compared with 48,454 on December 31, 1930.

(Continued on page 47)

## FLORIDA OPPORTUNITIES OFFERED THE FARMER

We need more farmers in Florida---where the average crop-value per acre leads all other states. Let us send you literature showing the many and varied advantages and opportunities offered. Address

## Model Land Co.

FLACLER SYSTEM  
ST. AUGUSTINE, FLORIDA

The late Henry M. Flagler and his organization have served Florida since 1886

## CONDENSED STATEMENT SHOWING THE CONDITION OF THE

### Lumbermen's Mutual Insurance Co., Mansfield, Ohio

DECEMBER 31, 1931

Securities Valued on Convention Plan	
Total income during the year	\$2,027,573.88
Total disbursements during the year	2,153,275.63
Total admitted assets	2,200,473.71
Total liabilities except capital	\$1,475,098.61

Capital actually paid up in cash Mutual Plan	
Surplus over all liabilities	\$725,375.10

Surplus as to policy holders	725,375.10
------------------------------	------------

Total liabilities	\$2,200,473.71
Amount at risk in United States December 31, 1931	291,868,803.00
Risks written in Maryland during 1931	2,233,077.00
Premiums on Maryland business in 1931	22,499.79
Losses paid in Maryland in 1931	4,423.72
Losses incurred in Maryland in 1931	4,420.55

### STATE OF MARYLAND

Office of the

STATE INSURANCE DEPARTMENT  
Baltimore, Md., March 1, 1932.

I Hereby Certify, That the above is a true abstract, taken from the Annual Statement of the LUMBERMEN'S MUTUAL INSURANCE CO., MANSFIELD, OHIO, for the year ending December 31, 1931, now on file in this Department.

WILLIAM C. WALSH,  
State Insurance Commissioner.

## By the Insurance Department CONDENSED STATEMENT SHOWING THE CONDITION OF THE Fidelity & Guaranty Fire Corp. Baltimore, Md.

DECEMBER 31, 1931

Securities Valued on Convention Plan	
Total income during the year	\$3,280,453.29
Total disbursements during the year	3,042,369.63
Total admitted assets	4,922,804.10

Total liabilities except capital	\$2,811,394.97
Capital actually paid up in cash \$1,000,000.00	
Surplus over all liabilities	1,111,409.23

Surplus as to policy holders	2,111,409.23
------------------------------	--------------

Total liabilities	\$4,922,804.10
Amount at risk in United States December 31, 1931	646,216,997.00
Risks written in Maryland during 1931	40,756,546.00
Premiums on Maryland business in 1931	154,537.44
Losses paid in Maryland in 1931	28,392.70
Losses incurred in Maryland in 1931	36,129.20

### STATE OF MARYLAND

Office of the

STATE INSURANCE DEPARTMENT  
Baltimore, Md., March 1, 1932.

I Hereby Certify, That the above is a true abstract, taken from the Annual Statement of the FIDELITY & GUARANTY FIRE CORP., BALTIMORE, MD., for the year ending December 31, 1931, now on file in this Department.

WILLIAM C. WALSH,  
State Insurance Commissioner.

### Bankers, Manufacturers, Merchants, of the South

When in Baltimore, drop in and see us.  
Maybe we can serve you in some way. The  
acquaintance may prove mutually helpful.

#### BALTIMORE COMMERCIAL BANK

GWYNN CROWTHER, President

26 South Street, Baltimore, Md.

Capital and Surplus \$1,350,000

Member Federal Reserve System

## Electric Bond and Share Company

Two Rector Street, New York

### We Offer For Sale

#### A MANUFACTURING SITE

Located at Thomson, Georgia; consisting of: Mill building, single story, mill constructed, size 117x265 ft., with 40x150 ft. El. 45 acres of land, two lakes of water, 42 houses, office building and store house; price \$25,000.00. For further information write

C. L. UPCHURCH & SONS, Athens, Ga.

### YOUNG & SELDEN COMPANY

MANUFACTURING

Bank and Commercial Stationers

BALTIMORE, MD.

(Continued from page 46)

#### United States Pipe and Foundry

The net income of the United States Pipe and Foundry Company, Burlington, N. J., for the year ended December 31, 1931, was \$1,012,215, according to the company's annual report. This compares with net earnings of \$2,881,046 for the year ended December 31, 1930. During 1931 the sum of \$265,441 was charged against reserve for improvements, additions and new construction, this being in large part for facilities at the Burlington plant to manufacture deLavaud pipe in 18-foot lengths. Directors declared dividends of \$1.20 per share on first preferred stock, payable quarterly at the rate of 30 cents per share, and \$2.00 per share on common stock, payable quarterly at the rate of 50 cents per share, sufficient money being set aside from surplus.

#### Otis Steel Report

In the annual pamphlet report of the Otis Steel Co., Cleveland, Ohio, President E. J. Kulas states that, with per capita output of steel in recent months back to the level of the 90's and replacement needs accumulating for automobiles, railroad equipment, etc., improvement should result in the iron and steel industry. Operations of the company for 1931 averaged about 43 per cent of capacity, showing an operating profit for the year of \$264,370. After charging off the company's usual depreciation, and providing bond interest, there was a net loss of \$1,571,342. In line with the company's policy of maintaining operating efficiency, the sum of \$1,377,541 for maintenance and renewals was charged to operations.

#### Wheeling Steel Corporation

According to the 12th annual report of the Wheeling Steel Corporation, Wheeling, W. Va., and subsidiaries, for the year ended December 31, 1931, net earnings from operations, after deducting charges of about \$3,090,000 for maintenance and repair of plants, were \$4,334,582. Total net profits for the year were \$1,932,755, while the loss for the year was \$3,339,139, after deductions for

depreciation of plants, depletion of minerals, and interest and discount on bonds and notes. In addition to current expenditures for maintenance and repairs, the corporation expended for betterments to property during the year the sum of \$3,252,925.

**Europe and Our Money.**—This is the title of a 223-page volume from the press of the MacMillan Company, New York, by Lothrop Stoddard, A. M., Ph. D. (Harvard), pointing out that foreign investments and foreign trade of this country have expanded "to the point of disaster" because of ignorance of the investing public, and specious propaganda of individuals "whose point of view has been more economic than ethical." Mr. Stoddard wonders whether our "prodigious venture" may not have been an abnormal episode, as well as a brief one, and poses a series of questions. The book is devoted to an appraisal of problems suggested by these queries. It is priced at \$2.25.

### Railway May Extend Lines

Charlotte, N. C.—Acting upon a petition of the Piedmont & Northern Railway Co. for a review of a lower court decision holding the railway must have authority from the Interstate Commerce Commission to extend its electric railway lines, the United States Supreme Court will decide the question of jurisdiction of the Interstate Commission over the railway company, which operates in North and South Carolina. The court will pass only on the question as to whether or not the railway must have the approval of the Commission before building extensions. Should the court hold that the Commission is without jurisdiction, the Piedmont & Northern plans to extend its lines from Spartanburg to Gastonia and from Charlotte to Winston-Salem.

### Operating Income Increases

Richmond, Va.—Net railway operating income of the Chesapeake & Ohio Railway Company for February shows an increase as compared with operations for February last year, according to a statement of the company. Gross revenues for the month were \$7,682,794, a decrease of \$1,025,654 as compared with February, 1931; operating expenses were \$4,697,591, a decrease of \$1,446,535, and net railway operating income was \$2,249,267, an increase of \$509,777 over February of last year. Net income after all charges, including sinking fund appropriation for the month, was \$1,470,462, an increase of \$305,847 over February of last year. Operating ratio is 61.1 per cent compared with 70.5 per cent for February of last year.

For two months ended February 29, 1932, gross revenues amounted to \$15,681,026, a decrease of \$3,405,436; operating expenses, \$9,950,436, a decrease of \$3,064,045; net railway operating income, \$4,200,793, a decrease of \$300,344, and net income after all charges, \$2,667,100, a decrease of \$585,364, compared with the corresponding period in 1931. Operating ratio for the period is 63.5 per cent, a decrease of 4.7 per cent as compared with the similar period last year.

### Bids on Veterans Hospital

Perry Point, Md.—Bids will be opened April 19 by the Veterans Administration, Washington, for the construction of a Veterans Administration Hospital at Perry Point, the work to include roads and walks, outside service connections and other items.





# PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



Bids close April 13, 1932.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., March 16, 1932.—**SEALED BIDS**, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 13, 1932, for furnishing all labor and materials and performing all work for the construction (except elevator and lighting fixtures) of the U. S. post office, etc., at Fort Myers, Fla. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 19, 1932.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., March 19, 1932.—**SEALED BIDS**, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 19, 1932, for furnishing all labor and materials and performing all work for the construction of the U. S. post office, etc., at Nyack, N. Y. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 6, 1932.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., March 8, 1932.—**SEALED BIDS**, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 6, 1932, for furnishing all labor and materials and performing all work for the construction of the U. S. inspection station at Beecher Falls, Vt. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 13, 1932.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., March 15, 1932.—**SEALED BIDS**, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 13, 1932, for furnishing all labor and materials and performing all work for the construction (except elevator) of the U. S. post office, court house, etc., at Lewisburg, Pa. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

## GENERAL INFORMATION

### About Proposal Advertising in Manufacturers Record

**PUBLICATION DAY:** Thursday.  
**FORMS CLOSE:** 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M., Tuesday, forward by night letter or air mail when possible.

### THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

*The rate is the same for both publications—35 cents a line each insertion.*

Bids close April 28, 1932.

**TREASURY DEPARTMENT**, Bureau of Engraving and Printing, Washington, D. C., March 17, 1932.—**SEALED BIDS**, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 28, 1932, for furnishing all labor and materials and performing all work for the foundations, etc., of the U. S. post office, court house, etc., at Norfolk, Va. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 11, 1932.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., March 18, 1932.—**SEALED BIDS**, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 11, 1932, for furnishing all labor and materials and performing all work for the foundations, etc., of the U. S. post office, court house, etc., at Norfolk, Va. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 15, 1932.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., March 9, 1932.—**SEALED BIDS**, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 15, 1932, for furnishing all labor and materials and performing all work for the construction (except elevators) of main building and power house, garage and laundry building, U. S. marine hospital, Baltimore, Md. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding six sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$50.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 5, 1932.

**U. S. ENGINEER OFFICE**, FIRST NEW ORLEANS DISTRICT, Poland and Dauphine Streets, New Orleans, La.—**SEALED BIDS** in duplicate will be received until 2:00 P. M., April 5, 1932, and then publicly opened, for furnishing all labor and materials and performing all work for dredging a navigation canal along North Fork from Schooner Bayou to the Intracoastal Waterway, comprising approximately 89,700 cubic yards, place measurement, and constructing an earth dam across North Fork, in Vermillion Parish, La. Further information on application.

Bids close April 8, 1932.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., March 10, 1932.—**SEALED BIDS**, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 8, 1932, for furnishing all labor and materials and performing all work for the construction (3rd contract) of personnel quarters, garage, etc., of the U. S. marine hospital at New Orleans, La. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close April 5, 1932.

**SEALED BIDS**, in triplicate, subject to the conditions contained herein, will be received by the Veterans Administration, Room 764, Arlington Building, Washington, D. C., until 2:30 P. M., April 5, 1932, and then publicly opened for furnishing all labor and materials and performing all work required for constructing and finishing complete at VETERANS ADMINISTRATION HOSPITAL, RUTLAND HEIGHTS, MASSACHUSETTS, ADMINISTRATION AND CLINICAL BUILDING NO. 1-A. This work will include excavating, roads, walks, grading, reinforced concrete, hollow tile, cut stone, slate stair treads, marble work, terrazzo, floor and wall tile, rubber tile, compressed asphalt tile and linoleum floors, iron work, steel stairs, steel shelving, cabinets and partitions, slate, metal and built-up roofing, roof ventilators, metal lathing, plastering, stucco, sound deadening, carpentry, metal weatherstrips, insect screens, painting, glazing, hardware, plumbing, heating and ventilating, electrical work, electric elevators, and outside service connections and such other items as shown or specified. **SEPARATE BIDS** will be received for (a) General Construction; and (b) Electric Elevators; all as set forth on bid form.

Bids will be considered only from individuals, firms or corporation possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract and in making awards, the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Administrator, drawings and specifications may be obtained upon application to the Construction Service, Room 764, Arlington Building, Washington, D. C. While no deposit will be necessary, return of the drawings and specifications within ten days after date of opening bids will be required. In case no bid is to be submitted, the return of plans and specifications, as soon as this fact has been determined and before the date for opening bids, is requested. Compliance with the requirement and with the request indicated will be considered in connection with future applications for drawings and specifications. **GEORGE E. IJAMS**, Assistant Administrator. March 5, 1932.

Bids close April 19, 1932.

**SEALED BIDS**, in triplicate, subject to the conditions contained herein, will be received by the Veterans Administration, Room 764, Arlington Building, Washington, D. C., until 2:30 P. M., April 19, 1932, and then publicly opened, for furnishing all labor and materials and performing all work required for constructing and finishing complete at VETERANS ADMINISTRATION HOME, TOGUS, MAINE, HOSPITAL BUILDING. This work will include excavating, roads, walks and drainage, reinforced concrete, hollow tile, brickwork, cut stone, architectural terra cotta, slate stair treads, marble work, terrazzo, floor and wall tile, rubber tile, compressed asphalt tile and linoleum floors, iron work, steel sash, steel stairs, steel shelving, cabinets and partitions, metal and built-up roofing, roof ventilators, skylights, lightning conductors, metal lathing, plastering, sound deadening, carpentry, metal weatherstrips, insect screens, linen chute, platform scales, painting, glazing, hardware, plumbing, refrigerating, heating and ventilating, electrical work, electric elevators, and outside distribution systems, and such other items as shown or specified. **SEPARATE BIDS** will be received for (a) General Construction; (b) Plumbing, Heating and Electrical Work; (c) Electric Elevators; and (d) Refrigerating Plant; all as set forth on bid form. Bids will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract and in making awards, the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Administrator, drawings and specifications may be obtained upon application to the Construction Service, Room 764, Arlington Building, Washington, D. C. While no deposit will be necessary, return of the drawings and specifications within ten days after date of opening bids will be required. In case no bid is to be submitted, the return of plans and specifications, as soon as this fact has been determined and before the date for opening bids, is requested. Compliance with the requirement and with the request indicated will be considered in connection with future applications for drawings and specifications. **GEORGE E. IJAMS**, Assistant Administrator, March 12, 1932.

Bids close April 5, 1932.

**\$125,000 Bonds**

In accordance with law and the terms of an ordinance adopted by the Board of Trustees of the City of Lafayette, Louisiana, the governing authority of the said City of Lafayette, Louisiana, the said Board of Trustees will receive sealed bids for the purchase of bonds in the sum of One Hundred and Twenty-five Thousand Dollars (\$125,000.00) issued by the City of Lafayette, Louisiana, said bonds to bear interest at the maximum rate of six per centum (6%) per annum, payable annually and maturing serially on the first day of March in each year from 1933 to 1957, both inclusive, said bonds to be in denominations of Five Hundred Dollars (\$500.00) each, and were authorized by the City of Lafayette, Louisiana, at an election held therein on November 30th, 1931, and are secured by the levy of special taxes in excess of all other taxes sufficient to pay the interest and principal thereof.

All bids for the purchase of said bonds shall be accompanied by a duly certified check in the sum of \$4000.00 payable to the order of the City of Lafayette, Louisiana, which amount will be held by the Mayor of the City of Lafayette, Louisiana, until the successful bidder is determined, checks of the unsuccessful bidders to be returned to them and the check of the successful bidder to be held as evidence of good faith and to be credited to this bid and in the event of his failure to fulfill the conditions of his bid, the amount of the check to be forfeited by him to the credit of the City of Lafayette, Louisiana.

All bids must be addressed to the Mayor of the City of Lafayette, Louisiana, with a statement on the envelope that it contains a bid for the bond issue offered, and the said bids will be received until 10 o'clock A. M. Tuesday, April 5th, 1932, at the office of the City Hall in the Court House Building, Lafayette, Louisiana, at which time and place they will be opened and read publicly.

The Board of Trustees of the City of Lafayette reserves the right to reject any and all bids.

**ROBERT L. MOUTON**, Mayor,  
City of Lafayette, Louisiana.  
**WILSON J. PECK**, Secretary,  
City of Lafayette, Louisiana.

Bids close April 19, 1932.

**SEALED BIDS**, in triplicate, subject to the conditions contained herein, will be received by the Veterans Administration, Room 764, Arlington Building, Washington, D. C., until 2:30 P. M., April 19, 1932, and then publicly opened for furnishing all labor and materials and performing all work required for constructing and finishing complete at VETERANS ADMINISTRATION HOSPITAL, PERRY POINT, MARYLAND, NURSES QUARTERS AND ATTENDANTS QUARTERS. This work will include excavating, roads, walks, grading, reinforced concrete, hollow tile, cast stone, slate stair treads, marble work, terrazzo, floor and wall tile, rubber tile, linoleum floors, iron work, steel stairs, steel shelving and partitions, slate, metal and built-up roofing, roof ventilators, metal lathing, plastering, stucco, carpentry, metal weatherstrips, insect screens, painting, glazing, hardware, plumbing, heating and ventilating, electrical work, and outside service connections and such other items as shown or specified. Bids will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract and in making awards, the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Administrator, drawings and specifications may be obtained upon application to the Construction Service, Room 764, Arlington Building, Washington, D. C. While no deposit will be necessary, return of the drawings and specifications within ten days after date of opening bids will be required. In case no bid is to be submitted, the return of plans and specifications, as soon as this fact has been determined and before the date for opening bids, is requested. Compliance with the requirement and with the request indicated will be considered in connection with future applications for drawings and specifications. **GEORGE E. IJAMS**, Assistant Administrator, March 19, 1932.

Bids close March 29, 1932.

**Maryland Highway Work**

DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

**NOTICE TO CONTRACTORS**

Baltimore, Md.

**SEALED PROPOSALS** for the construction of four sections of State Highway as follows:

Anne Arundel County, Contract No. AA-113-74—Federal Aid Project No. 229B—One section of State Highway along the Furnace Creek Road from the end of Contract No. AA-112 to Marley Creek for a distance of 1.18 miles (concrete)

Baltimore City, Contract No. BC-115-74—One section of State Highway along Franklinton Road from Baltimore Street to Franklin Street for a distance of 0.43 mile (sheet asphalt)

Carroll County, Contract No. C1-103-52—One section of State Highway along the Bachman Mills Road from the end of Contract No. C1-81 near Bachman Mills toward the Melrose-Penna. State Line Road for a distance of 1.02 miles (concrete)

St. Mary's County, Contract No. SM-95-84—One section of State Highway from the Chaptico-Budds Creek Road toward Newmarket for a distance of 1.48 miles (gravel)

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 29th day of March, 1932, at which time and place they will be publicly opened and read. Prequalification of bidders required.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, for each separate project, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.  
BY ORDER of the State Roads Commission this 15th day of March, 1932.

**G. CLINTON UHL**, Chairman.  
**L. H. STEUART**, Secretary.

Bids close April 5, 1932.

**Delaware Highway Work**

Dover, Del.

Sealed proposals will be received by the State Highway Department, at its office, Dover, Del., until 2:00 o'clock P. M., (Eastern Standard Time), April 5th, 1932, and at that place and time publicly opened for contracts involving the following approximate quantities:

**CONTRACT 153****DUBLIN HILL—JACOBS CROSS ROADS**

3.36 MILES

8,400 cu. yds. Excavation  
1,500 cu. yds. Borrow  
3,600 Tons Stone Surface Course  
50 cu. yds. Class A Concrete  
3,000 lbs. Reinforcement  
230 lin. ft. 15 in. R C Pipe  
70 lin. ft. 18 in. R C Pipe  
30 lin. ft. 24 in. R C Pipe  
40 lin. ft. 30 in. R C Pipe

**CONTRACT 182C****FIELDSBORO—DRAWYERS 4.32 MILES**

8,500 cu. yds. Excavation  
7,000 cu. yds. Borrow  
700 Tons Stone Base Course  
11,500 cu. yds. Concrete Pavement  
6,500 lin. ft. Expansion Joint  
5,800 sq. ft. Concrete Sidewalk  
350 Tons Bituminous Concrete Surface Course  
3,000 lbs. Catch Basin Castings  
1,200 lin. ft. 12 in. Corr. Metal Pipe  
1,000 lin. ft. 15 in. Corr. Metal Pipe  
200 lin. ft. 15 in. R C Pipe  
1,200 lin. ft. Concrete Curb  
6,500 lin. ft. Wire Cable Guard Rail  
20 End Post Attachments  
5,000 lin. ft. Wood Shoulder Curb.

**CONTRACT 187****BRYAN'S STORE—HARDSCRABBLE**

4.8 MILES

14,000 cu. yds. Excavation  
5,000 cu. yds. Borrow  
7,480 cu. yds. Concrete Pavement  
25,000 lin. ft. Long Joint (Non-Metallic)  
5,600 lin. ft. Expansion Joint  
140 cu. yds. Class A Concrete  
6,500 lbs. Reinforcement  
560 lin. ft. 15 in. Corr. M. Pipe  
240 lin. ft. 15 in. R C Pipe  
90 lin. ft. 18 in. R C Pipe  
60 lin. ft. 24 in. R C Pipe  
30 lin. ft. 30 in. R C Pipe  
30 lin. ft. 36 in. R C Pipe  
2,000 lin. ft. Wood Shoulder Curb.

**CONTRACT 226****FISHER'S SCHOOL—FARMINGTON**

4.38 MILES

6 Acres Clearing  
6 Acres Grubbing  
11,000 cu. yds. Excavation  
7,500 cu. yds. Borrow  
4,450 cu. yds. Concrete Pavement  
2,500 lin. ft. Expansion Joint  
230 cu. yds. Class A Concrete  
12,000 lbs. Reinforcement  
800 lin. ft. 15 in. Corr. M. Pipe  
240 lin. ft. 15 in. R C Pipe  
90 lin. ft. 18 in. R C Pipe  
30 lin. ft. 24 in. R C Pipe  
30 lin. ft. 30 in. R C Pipe  
30 lin. ft. 36 in. R C Pipe  
5,000 lin. ft. Wood Shoulder Curb  
500 lin. ft. Timber Piling  
3M ft. B M Sheet Piling.

**CONTRACT 251****DELMAR: SIDEWALK 2900 FEET**

2,000 cu. yds. Borrow  
11,700 sq. ft. Concrete Sidewalk  
1,500 lbs. Catch Basin Castings.  
Performance of contract shall commence within ten (10) days after execution of the contract and be completed as specified.

All labor employed on these contracts shall be legal residents of the State of Delaware, and special provisions for use of machinery is provided in each proposal.

Monthly payments will be made for 90 per cent of the construction completed each month.

Bidders must submit proposals upon forms provided by the Department.

Each proposal must be accompanied by a surety bond, certified check, or money to the amount of at least ten (10) per centum of the total amount of the proposal.

The envelope containing the proposal must be marked "Proposal for the construction of State Highway Contract No. ...."

The Contract will be awarded or rejected within twenty (20) days from the date of opening proposals.

The right is reserved to reject any or all bids.

Complete sets of plans and specifications may be obtained after March 29th, 1932, upon receipt of two dollars (\$2.00) for each contract, which amount will not be refunded.

STATE HIGHWAY DEPARTMENT.



Bids close April 11, 1932.

**TREASURY DEPARTMENT**, office of the supervising architect, Washington, D. C., March 11, 1932—SEALED BIDS in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., April 11, 1932, for furnishing all labor and materials and performing all work for the construction (except elevator) of the surgical unit and laundry building approach work, underground service lines, laundry equipment, etc., of the U. S. marine hospital at Memphis, Tenn. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798) and executive order of January 19, 1932. Drawings and specifications, not exceeding 3 sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close March 29, 1932.

### Buildings at Airport

**BOARD OF LEVEE COMMISSIONERS,**  
ORLEANS LEVEE DISTRICT,  
606 COMMON STREET  
NEW ORLEANS, LA.

New Orleans, La., Feb. 15th, 1932.

Sealed proposals will be received at the office of the Board of Levee Commissioners of the Orleans Levee District at New Orleans, La., on Tuesday, March 29, 1932, at 12 o'clock noon, and then publicly opened, for furnishing all labor, materials and equipment, and performing all work for the construction of the following structures located at the Shushan Airport on Lake Pontchartrain:

- (1) One Repair Shop Building—approximately 102 feet by 122 feet.
- (2) One two-story brick administration building and tower, approximately 290 feet by 70 feet, and Transformer Building.
- (3) One emergency and storage building, approximately 127 feet by 60 feet.
- (4) Two hangars, each approximately 197 feet by 126 feet.
- (5) Cantilever or overhanging doors for

hangars and sliding doors for Repair Building.

A deposit of ten percent (10%) of the amount bid in cash or certified check will be required with each proposal.

When notarial contract is entered into, a surety bond in the amount of 100% of the cost of the contract will be required to be furnished by a surety company authorized to do business in Louisiana, to ensure the satisfactory execution and completion of the work.

Plans and specifications are on file in the office of the Board of Levee Commissioners of the Orleans Levee District at No. 606 Common Street, New Orleans, La., and will be furnished to prospective bidders upon payment of One Hundred Dollars (\$100.00), which will be refunded upon the return of the same in good condition.

The right is reserved to reject any or all bids and to waive informalities.

For further information, address John Klorer, Chief Engineer, Orleans Levee Board, No. 606 Common Street, New Orleans, Louisiana.

A. L. SHUSHAN,  
President.

CHAS. J. DONNER,  
Secretary.

## CLASSIFIED OPPORTUNITIES

### MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES

**TIMBER AND TIMBER LAND**  
FOR SALE—30 Million feet choice river swamp hardwoods in South Georgia. Priced to sell. Address No. 9179, care of Manufacturers Record, Baltimore, Md.

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IF YOU HAVE SOMETHING with merit to be made of iron, can manufacture and market same for you. Write P. O. Box 253, Sheffield, Alabama.

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**FOR SALE**—Textile Plant, four story semi-proof building, sixty thousand square feet, eleven acres land, private side track, located in thriving Mississippi Delta Town. Address 306 Messick Bldg., Memphis, Tenn.

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**JACKSONVILLE, FLA., WANTS YOU.** Whole block industrial site 172x320, near center city. All improvements, railroad spur, steamships to many foreign ports, a very low electrical rate, taxes cut to the bone. Address  
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941 Munsey Building, Washington, D. C.  
417 Wachovia Bldg., Winston-Salem, N. C.

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P. O. BOX 1312,  
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**CHEMICAL ENGINEER**  
wants to work for a chemical company or consulting engineers; 12 years experience in chemical and engineering fields, some analytical. Address  
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IF YOU ARE OPEN to overtures for new connection and qualified for a salary between \$2500 and \$25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service of recognized standards and reputation, through which preliminaries are negotiated confidentially for positions of the caliber indicated. The procedure is individualized to each client's personal requirements, your identity covered and present position protected. Established twenty-two years. Send only name and address for details.

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Rough or Machined.  
**W. W. PETTIS COMPANY,**  
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HEINE, LEWELLYN, BRADY  
150-200-250-300 h. p., 165 lb.  
Some with Stokers and Oil Burners.  
Lot other equipment cheap.  
**HERFURTH MACHINERY CORP.,**  
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**FOR SALE**  
One—75 H. P. Fairbanks-Morse full Diesel Engine, complete with tanks and air compressor  
One—¾ Erie steam shovel, crawler type  
One—12 ton Brookville locomotive, standard gauge  
One—8 ton Whitecomb locomotive, 36" gauge  
One—Keystone Drill, traction type  
One—¾ Page dragline bucket  
Two—4 ton Western dump cars, 36" gauge  
5000 ft., 56 lb. relay rail.  
All in first class condition.  
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Beams, Angles, Channels

All sizes and lengths. Fabricated and cut to size. Call or write

**Maryland Pipe & Steel Corp.**  
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24" x 6" "Crescent" Planer and Matcher.  
32" x 7" "Powers" Single Surfer, motor drive.  
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2—250 HP Water Tube Boilers (Heine Type). Set in Battery—Steel Suspension. Hand Fired Grates. Hartford Insuring for 185 lbs. in Ill. Exceptionally fine condition—Immediate Shipment.

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## BOILER OPPORTUNITY

2 New 500 H.P. Heine "V" type water tube boilers, 199 lb. pressure, A.S.M.E. with super heaters and stokers.

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We thank all of our friends and customers, whose loyalty made this expansion possible, and assure them of our continued faithful service.

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One 12 ton Frick.

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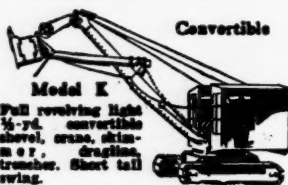
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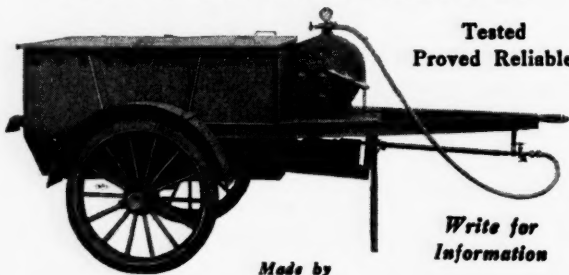


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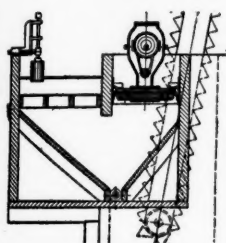
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Fairbanks, Morse & Co., Chicago, Ill.  
General Electric Co., Schenectady, N. Y.  
Partridge, Arthur S., St. Louis, Mo.  
Rockford Power Machy. Co., Rockford, Ill.

**(Generators, Motors, etc., Used.)**

Delta Equipment Co., Philadelphia, Pa.  
Electric Service Co., Cincinnati, Ohio.  
General Electric Co., Schenectady, N. Y.  
O'Brien Machinery Co., The, Phila., Pa.  
Reading Engineering Wks., Reading, Pa.  
Rockford Power Machy. Co., Rockford, Ill.

**(Repairing (Motors, Generators, etc.))**

Electric Service Co., Cincinnati, Ohio.

**ELECTRIC LIGHTING.**

General Electric Vapor Lamp Co., Hoboken, N. J.  
Westinghouse Lamp Co., New York City.

**ELECTRIC SHOVELS (See Shovels.)****ELEVATORS (Electric.)**

Millner Co., St. Louis, Mo.

**(Hand and Belt Power.)**

Millner Co., St. Louis, Mo.

**ENGINEERS (Airports.)**

Lockwood Greene Engrs., Inc., New York.

**(Appraisal.)**

Lockwood Greene Engrs., Inc., New York.  
Main, Inc., Chas. T., Boston, Mass.  
White Engineering Corp., J. G., New York.  
Wiedeman & Singleton, Inc., Atlanta.

**(Bridge.)**

Gardner & Howe, Memphis, Tenn.  
Hardaway Contracting Co., Columbus, Ga.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.  
Steel & Leiby, Knoxville, Tenn.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Wiley & Wilson, Lynchburg, Va.

**(Chemical.)**

Dow & Smith, New York, N. Y.  
Picard Laboratories, Birmingham, Ala.

**(Civil.)**

Gardner & Howe, Memphis, Tenn.  
Harrub Engr. Co., C. N., Nashville, Tenn.  
Hills and Youngberg, Jacksonville, Fla.  
Main, Inc., Chas. T., Boston, Mass.  
Saxe, Van Rensselaer P., Baltimore, Md.  
Spring, Chas. Herbert, Greensboro, N. C.  
Steel & Leiby, Knoxville, Tenn.  
White Engineering Corp., J. G., New York.

**(Consulting.)**

Barstow & Co., W. S., New York City.  
Converse & Co., J. B., Mobile, Ala.  
Engineering Service Corp., Houston, Tex.  
Goder, Joseph, Chicago, Ill.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

**(Cost.)**

Ernst & Ernst, New York, N. Y.

**(Dams.)**

Alpaugh & Sons, Chas. W., Manassas, Va.  
Barstow & Co., W. S., New York City.  
Byllesby Engineering and Management Corp., Chicago, Ill.  
Hall, J. Henry, Lexington, Ky.  
Main, Inc., Chas. T., Boston, Mass.  
Saxe, Van Rensselaer P., Baltimore, Md.  
Steel & Leiby, Knoxville, Tenn.

**(Drainage and Irrigation.)**

Hills and Youngberg, Jacksonville, Fla.

**(Efficiency.)**

Ernst & Ernst, New York, N. Y.

**(Electrical.)**

Engineering Service Corp., Houston, Tex.  
Lee Engineering Corp., William S., Charlotte, N. C.  
Main, Inc., Chas. T., Boston, Mass.  
Saxe, Van Rensselaer P., Baltimore, Md.  
Steel & Leiby, Knoxville, Tenn.

**(Electric Light and Power.)**

Barstow & Co., W. S., New York City.

**(Sewage Disposal Plants.)**

Byllesby Engineering and Management Corp., Chicago, Ill.

**(Sewerage and Waterworks.)**

Consoer, Older & Quinlan, Inc., Chicago.  
Hall, J. Henry, Lexington, Ky.  
Hardaway Contracting Co., Columbus, Ga.

Hall, J. Henry, Lexington, Ky.  
Lee Engineering Corp., William S., Charlotte, N. C.  
Main, Inc., Chas. T., Boston, Mass.  
White Engineering Corp., J. G., New York, N. Y.

**(Gas.)**

Byllesby Engineering and Management Corp., Chicago, Ill.  
Huey, S. E., Monroe, La.

**(Geological.)**

Froehling & Robertson, Inc., Richmond, Va.

**(Harbor Improvements.)**

Engineering Service Corp., Houston, Tex.

**(Heating.)**

Wiley & Wilson, Lynchburg, Va.

**(Hydraulic.)**

Alpaugh & Sons, Chas. W., Manassas, Va.  
Main, Inc., Chas. T., Boston, Mass.  
Wiley & Wilson, Lynchburg, Va.

**(Hydro-electric.)**

Alpaugh & Sons, Chas. W., Manassas, Va.  
Barstow & Co., W. S., New York City.  
Byllesby Engineering and Management Corp., Chicago, Ill.  
Hall, J. Henry, Lexington, Ky.  
Lee Engineering Corp., William S., Charlotte, N. C.  
Main, Inc., Chas. T., Boston, Mass.  
Saxe, Van Rensselaer P., Baltimore, Md.  
Steel & Leiby, Knoxville, Tenn.

**(Ice and Refrigerating.)**

Engineering Service Corp., Houston, Tex.

**(Industrial Plants.)**

Barstow & Co., W. S., New York City.  
Consoer, Older & Quinlan, Inc., Chicago.  
Converse & Co., J. B., Mobile, Ala.  
Gardner & Howe, Memphis, Tenn.  
Hall, J. Henry, Lexington, Ky.  
Hills and Youngberg, Jacksonville, Fla.  
Lockwood Greene Engrs., Inc., New York.  
Main, Inc., Chas. T., Boston, Mass.  
Preacher & Co., Inc., G. Lloyd, Atlanta.  
Saxe, Van Rensselaer P., Baltimore, Md.  
Smith, Elroy G., Augusta, Ga.  
Wiley & Wilson, Lynchburg, Va.

**(Inspection and Tests.)**

Dow & Smith, New York, N. Y.  
Froehling & Robertson, Inc., Richmond, Va.  
Hunt Co., Robert W., Chicago, Ill.  
McCallum Inspection Co., Norfolk, Va.  
Picard Laboratories, Birmingham, Ala.  
Southwestern Laboratories, Ft. Worth, Tex.

**(Lighting.)**

Byllesby Engineering and Management Corp., Chicago, Ill.  
General Electric Vapor Lamp Co., Hoboken, N. J.  
Westinghouse Lamp Co., New York City.

**(Mechanical.)**

Engineering Service Corp., Houston, Tex.  
Lee Engineering Corp., William S., Charlotte, N. C.

**(Mining. See Engineers, Geological.)****(Municipal.)**

Consoer, Older & Quinlan, Inc., Chicago.  
Dow & Smith, New York, N. Y.  
Harrub Engr. Co., C. N., Nashville, Tenn.  
Hills and Youngberg, Jacksonville, Fla.  
Huey, S. E., Monroe, La.  
McCrary Co., The J. B., Atlanta, Ga.  
Wiley & Wilson, Lynchburg, Va.

**(Paving and Roads.)**

Dow & Smith, New York, N. Y.  
Harrub Engr. Co., C. N., Nashville, Tenn.

**(Printing and Newspaper Plants.)**

Lockwood Greene Engrs., Inc., New York.

**(Public Service Properties.)**

Barstow & Co., W. S., New York City.  
Byllesby Engineering and Management Corp., Chicago, Ill.  
Hall, J. Henry, Lexington, Ky.  
Main, Inc., Chas. T., Boston, Mass.  
White Engineering Corp., J. G., New York.

**(Railroad.)**

Huey, S. E., Monroe, La.

**(Reinforced Concrete Bridges, Buildings, etc.)**

Gardner & Howe, Memphis, Tenn.  
Lockwood Greene Engrs., Inc., New York.  
Main, Inc., Chas. T., Boston, Mass.  
Saxe, Van Rensselaer P., Baltimore, Md.  
Steel & Leiby, Knoxville, Tenn.

**(Sanitary.)**

Whitman, Regardt & Smith, Balto., Md.  
Wiley & Wilson, Lynchburg, Va.

**(Sewage Disposal Plants.)**

McCrary Co., The J. B., Atlanta, Ga.  
Wiedeman & Singleton, Inc., Atlanta.

**(Sewerage and Waterworks.)**

Consoer, Older & Quinlan, Inc., Chicago.  
Hall, J. Henry, Lexington, Ky.  
Hardaway Contracting Co., Columbus, Ga.

on, Ky.  
William S., Char-  
oston, Mass.  
P., J. G., New  
burg, Va.  
and Management  
e., Richmond, Va.  
vements),  
Houston, Tex.  
rg, Va.  
Manassas, Va.  
ston, Mass.  
burg, Va.  
Manassas, Va.  
New York City  
and Management  
n, Ky.  
William S., Char-  
on, Mass.  
reenville, S. C.  
J. G., New  
g, Va.  
rating),  
Houston, Tex.  
s.)  
New York City  
nc., New York  
obile, Ala.  
Tenn.  
Ky.  
sonville, Fla.  
nc., New York  
ston, Mass.  
Lloyd, Atlanta  
nnville, S. C.  
Ga.  
g, Va.  
s.)  
ille, Ala.  
nc., New York  
easta),  
N. Y.  
Richmond, Va.  
ago, Ill.  
Norfolk, Va.  
gham, Ala.  
t. Worth, Tex.  
Management  
Co., Hob-  
New York City  
g, Va.  
Houston, Tex.  
am S., Char-  
n, Mass.  
Va.  
ineers, Ge-  
nc., Chicago  
Y.,  
shville, Tenn.  
nnville, Fla.  
anta, Ga.  
t, Va.  
Y.  
shville, Tenn.  
paper  
New York  
erties),  
York City  
Management  
y, Mass.  
G., New  
Bridges.

**Harrold Eng. Co.**, C. N., Nashville, Tenn.  
**Hills and Youngberg**, Jacksonville, Fla.  
**White Eng. Corp.**, J. G., New York, N. Y.  
**Wichman & Singleton, Inc.**, Atlanta, Ga.  
**Wiley & Wilson**, Lynchburg, Va.  
**—(Structural.)**  
**Hills and Youngberg**, Jacksonville, Fla.  
**Hugh S. E. Monroe**, La.  
**Lockwood Greene Engrs., Inc.**, New York.  
**Van Rensselaer P.**, Baltimore, Md.  
**Virginia Bridge & Iron Co.**, Roanoke, Va.  
**—(Textile Mills.)**  
**Lockwood Greene Engrs., Inc.**, New York.  
**Maine, Inc.**, Chas. T., Boston, Mass.  
**Hirsh & Co.**, J. E., Greenville, S. C.  
**—(Ventilating and Heating.)**  
**Wiley & Wilson**, Lynchburg, Va.  
**—(Water Supply.)**  
**Wiley & Wilson**, Lynchburg, Va.  
**ENGINES (Compressed Air.)**  
**Dale Engine Co.**, Grand Haven, Mich.  
**—(Diesel Type.)**  
**Fairbanks, Morse & Co.**, Chicago, Ill.  
**Superior Engine Co.**, Springfield, O.  
**—(Gas and Gasoline.)**  
**Merling Engine Co.**, Buffalo, N. Y.  
**—(Marine.)**  
**Fairbanks, Morse & Co.**, Chicago, Ill.  
**—(Steam.)**  
**Allis-Chalmers Mfg. Co.**, Milwaukee, Wis.  
**Lombard Iron Works & Supply Co.**, Augusta, Ga.  
**Schofield's Sons Co.**, J. S., Macon, Ga.  
**ENVELOPES.**  
**Young & Selden Co.**, Baltimore, Md.  
**ESTIMATORS (Building & Con-  
struction.)**  
**Martin, Joe B.**, Washington, D. C.  
**Spring, Chas. Herbert**, Greensboro, N. C.  
**EXCAVATING MACHINERY.**  
**Austin-Western Road Machinery Co.**, Chi-  
cago, Ill.  
**Bay City Shovels, Inc.**, Bay City, Mich.  
**Bucyrus-Erie Co.**, So. Milwaukee, Wis.  
**National Equipment Corp.**, (Kochring,  
Parsons), Milwaukee, Wisconsin.  
**Northwest Engineering Co.**, Chicago, Ill.  
**Owen Bucket Co.**, The, Cleveland, Ohio.  
**EXCAVATORS (Clamshell and  
Orange Peel.)**  
**Byers Machine Co.**, Ravenna, O.  
**Northwest Engineering Co.**, Chicago, Ill.  
**Ohio Power Shovel Co.**, Lima, Ohio.  
**—(Dragline. See Dragline Ex-  
cavators.)**  
**—(Trench.)**  
**Bay City Shovels, Inc.**, Bay City, Mich.  
**Bucyrus-Erie Co.**, So. Milwaukee, Wis.  
**Ohio Power Shovel Co.**, Lima, Ohio.  
**EXPANSION JOINTS (Road and  
Street.)**  
**Curey Co., Philip**, Lockland, Cincinnati, Ohio.  
**EXPLOSIVES.**  
**Du Pont de Nemours & Co., Inc.**, E. I.,  
Wilmington, Del.  
**FACTORY Management Systems.**  
**Bunt & Ernst**, New York, N. Y.  
**FEED-WATER HEATERS and  
Purifiers.**  
**American Water Softener Co.**, Phila., Pa.  
**International Filter Co.**, Chicago, Ill.  
**FENCING, ENTRANCE GATES  
(Iron, Steel and Wire.)**  
**American Steel and Wire Co.**, Balto., Md.  
**Atlantic Steel Co.**, Atlanta, Ga.  
**Cyclone Fence Co.**, Waukegan, Ill.  
**FENCING (Field and Industrial,  
Wire Woven.)**  
**American Steel and Wire Co.**, Balto., Md.  
**Cyclone Fence Co.**, Waukegan, Ill.  
**Gulf States Steel Co.**, Birmingham, Ala.  
**FERTILIZER Mixing Plants.**  
**Grumder Crusher & Pulverizer Co.**, St.  
Louis, Mo.  
**FILTER (For Domestic and  
Industrial Purposes.)**  
**American Water Softener Co.**, Phila., Pa.  
**Bacharach & Co.**, E. W., Kansas City,  
Mo.  
**International Filter Co.**, Chicago, Ill.  
**Roberts Filter Mfg. Co.**, Darby (Phila.).  
**FINANCING.**  
**Electric Bond & Share Co.**, New York.  
**FIREPROOF Building Material.**  
**Bannon Pipe Co.**, Louisville, Ky.  
**—Doors and Shutters.**  
**Wilson Corp.**, The J. G., New York City.

**FITTINGS (Wire Rope.)**  
**American Steel & Wire Co.**, Chicago, Ill.  
**Roebbling's Sons Co.**, John A., Trenton,  
N. J.  
**FLANGES (Iron and Steel.)**  
**Dart Mfg. Co.**, E. M., Providence, R. I.  
**U. S. Pipe & Foundry Co.**, Burlington,  
N. J.  
**FLOOR (Asphalt Mastic.)**  
**Barber Asphalt Co.**, Philadelphia, Pa.  
**—(Northern Hard Maple.)**  
**Holt Hardwood Co.**, Oconto, Wis.  
**—(Open Steel.)**  
**Kerlow Steel Flooring Co.**, Jersey City,  
N. J.  
**FLOOR Plates and Stair Treads.**  
**Central Iron & Steel Co.**, Harrisburg, Pa.  
**FLOORING (Laid and Finished.)**  
**Osborne, Earl N.**, Roanoke, Va.  
**FORMED PRODUCTS (Roofing.)**  
**American Rolling Mill Co.**, Middletown, O.  
**FOUNDRIES and Machine Shops.**  
**General Machine Works**, York, Pa.  
**Glamorgan Pipe & Fdy. Co.**, Lynchburg,  
Va.  
**Lombard Iron Works & Supply Co.**, Au-  
gusta, Ga.  
**Richmond Foundry & Mfg. Co.**, Rich-  
mond, Va.  
**FOUNDRY Equipment and Sup-  
plies.**  
**Hill & Griffith Co.**, Cincinnati, O.  
**FOUNDRY FACINGS (Tale and  
Soapstone.)**  
**Hill & Griffith Co.**, Cincinnati, O.  
**FURNACES (Water-Cooled.)**  
**Fuller Lehigh Co.**, Fullerton, Pa.  
**GALVANIZED Products.**  
**Beasmer Galvanizing Works**, Birming-  
ham, Ala.  
**Cattle & Bros.**, Jos. P., Philadelphia, Pa.  
**Enterprise Galvanizing Co.**, Phila., Pa.  
**—Steel and Iron.**  
**American Rolling Mill Co.**, Middletown, O.  
**American Sheet & Tin Plate Co.**, Pitts-  
burgh, Pa.  
**GAS HOLDERS.**  
**Chattanooga Boiler & Tank Co.**, Chatta-  
nooga, Tenn.  
**Chicago Bridge & Iron Wks.**, Birmingham,  
McClintic-Marshall Corp., Bethlehem, Pa.  
**GAS PRODUCERS.**  
**Wood & Co.**, R. D., Philadelphia, Pa.  
**GASOLINE and KEROSENE.**  
**Gulf Refining Co.**, Pittsburgh, Pa.  
**GEARS.**  
**Earle Gear & Machine Co.**, Phila., Pa.  
**General Electric Co.**, Schenectady, N. Y.  
**GENERATORS, MOTORS (New.)**  
**General Electric Co.**, Schenectady, N. Y.  
**—(Used.)**  
**Guyan Machine Shops**, Logan, W. Va.  
**O'Brien Machinery Co.**, Phila., Pa.  
**GEOLOGISTS. (See Engineers  
Geological.)**  
**GLASS. (Window.)**  
**Pittsburgh Plate Glass Co.**, Pittsburgh.  
**GRADERS (Elevating.)**  
**Austin-Western Road Machinery Co.**, Chi-  
cago, Ill.  
**Caterpillar Tractor Co.**, Peoria, Ill.  
**Gallon Iron Wks. & Mfg. Co.**, Gallon, O.  
**GRANITE (Building and Monu-  
mental.)**  
**Gardner Brothers**, Salisbury, N. C.  
**North Carolina Granite Corp.**, The, Mount  
Airy, N. C.  
**GRATES and Grate Bars.**  
**Schofield's Sons Co.**, J. S., Macon, Ga.  
**GRATING (Area, Flooring, Side-  
walk.)**  
**Hendrick Mfg. Co.**, Carbondale, Pa.  
**Kerlow Steel Flooring Co.**, Jersey City,  
N. J.  
**GRAVEL (Roofing and Road.)**  
**American Limestone Co.**, Knoxville, Tenn.  
**Arundel Corp.**, The, Baltimore, Md.  
**Bortley & Co.**, W. W., Roanoke, Va.  
**Friend & Co.**, Inc., Petersburg, Va.  
**Georgia Sand & Gravel Co.**, Augusta, Ga.  
**GREASE CUPS.**  
**Lunkenhelmer Co.**, The, Cincinnati, O.

**GRILLES (Brass, Bronze, Steel,  
etc.)**  
**Manhattan Perforated Metal Co., Inc.**,  
Long Island City, N. Y.  
**GRINDERS WHEELS.**  
**Carborundum Co.**, Niagara Falls, N. Y.  
**GUARD RAIL (Road.)**  
**National Traffic Guard Co.**, Atlanta, Ga.  
**GUNITE CONSTRUCTION.**  
**Cement Gun Construction Co.**, Chicago.  
**Gunite Conc. & Constr. Co.**, Kansas City.  
**Gunite Constr. Co.**, New York City.  
**GUNPOWDER.**  
**Du Pont de Nemours & Co.**, E. I.,  
Wilmington, Del.  
**GUNS (Hydraulic.)**  
**Georgia Iron Works**, Augusta, Ga.  
**HANGARS (Airplane.)**  
**Ingaile Iron Works**, Birmingham, Ala.  
**HARBOR IMPROVEMENTS.**  
**Arundel Corp.**, Baltimore, Md.  
**Atlantic, Gulf & Pacific Co.**, New York.  
**HEATERS (Asphalt.)**  
**Honhorst Co.**, Jos., Cincinnati, O.  
**HEATING Apparatus (Engineers  
and Contractors.)**  
**Poe Piping & Heating Co.**, Greenville,  
S. C.  
**HOISTS (Chain.)**  
**Cleveland Crane & Engr. Co.**, Wickliffe, O.  
**Wright Mfg. Co.**, Bridgeport, Conn.  
**—(Electric, Gasoline.)**  
**Dake Engine Co.**, Grand Haven, Mich.  
**—(Steam.)**  
**Dake Engine Co.**, Grand Haven, Mich.  
**HOTELS.**  
**Southern Hotel**, The, Baltimore, Md.  
**HYDRANTS (Fire.)**  
**Ludlow Valve Mfg. Co.**, The, Troy, N. Y.  
**Myers & Bros. Co.**, The, F. E., Ashland,  
Ohio  
**Wood & Co.**, R. D., Philadelphia, Pa.  
**HYDRO - ELECTRIC POWER  
COMPANIES (Offering Indus-  
trial and Commercial Oppor-  
tunities.)**  
**Appalachian Electric Power Co.**, Roanoke,  
Va.  
**Crisp County Power Commission**, Cor-  
dell, Ga.  
**Seaboard Public Service Co.**, Alexandria,  
Va.  
**Texas Power & Light Co.**, Dallas, Texas.  
**INCINERATORS.**  
**Brooks-Fisher Co.**, Atlanta, Ga.  
**D-N Corporation**, Winston-Salem, N. C.  
**Goder, Joseph**, Chicago, Ill.  
**INCORPORATORS.**  
**Delaware Registration Trust Co.**, Wil-  
mington, Del.  
**INSULATING Materials**  
**General Electric Co.**, Schenectady, N. Y.  
**—Quilt.**  
**Cabot, Inc.**, Samuel, Boston, Mass.  
**INVESTMENT SECURITIES.**  
**Electric Bond & Share Co.**, New York.  
**Nuveen & Co.**, John, Chicago.  
**IRON.**  
**—(Ingot, for Culverts, etc.)**  
**American Rolling Mill Co.**, Middletown, O.  
**JAIL CELLS.**  
**Roanoke Iron & Bridge Wks.**, Roanoke,  
Va.  
**JOINTS (Pipe.)**  
**Leadite Co.**, Philadelphia, Pa.  
**KETTLES (Pavers and Roofers.)**  
**Honhorst Co.**, Jos., Cincinnati, O.  
**LADDERS (Rolling.)**  
**Myers & Bro. Co.**, The, F. E., Ashland, O.  
**LAMPS (Incandescent.)**  
**General Electric Vapor Lamp Co.**, Hobo-  
ken, N. J.  
**Western Electric Co.**, New York, N. Y.  
**Westinghouse Lamp Co.**, New York City.  
**LIGHTING (Factory and Mill.)**  
**General Electric Vapor Lamp Co.**, Hobo-  
ken, N. J.  
**Westinghouse Lamp Co.**, New York City.  
**—Fixtures (Electric.)**  
**Western Electric Co.**, New York City.  
**Westinghouse Lamp Co.**, New York City.  
**LININGS (Flue, Fire Clay.)**  
**Lee Clay Products Co.**, Clearfield, Ky.  
**Owensboro Sewer Pipe Co.**, Owensboro, Ky.

**—(Tube Mill.)**  
**Fuller Lehigh Co.**, Fullerton, Pa.  
**LITHOGRAPHERS and EN-  
GRAVERS.**  
**Smith & Son Co.**, Oscar T., Balto., Md.  
**Young & Selden Co.**, Baltimore, Md.  
**LOADING and UNLOADING  
MACHINERY (Portable.)**  
**Northwest Engineering Co.**, Chicago, Ill.  
**LOCOMOTIVES. (Gasoline.)**  
**Whitcomb Locomotive Co.**, Rochelle, Ill.  
**—(Industrial.)**  
**Southern Iron & Equipment Co.**, Atlanta.  
**Whitcomb Locomotive Co.**, Rochelle, Ill.  
**—(Mining.)**  
**Whitcomb Locomotive Co.**, Rochelle, Ill.  
**—(Railway.)**  
**Southern Iron & Equipment Co.**, Atlanta.  
**Whitcomb Locomotive Co.**, Rochelle, Ill.  
**LUBRICANTS.**  
**Gulf Refining Co.**, Pittsburgh, Pa.  
**LUBRICATORS (Force Feed.)**  
**Lunkenhelmer Co.**, The, Cincinnati, O.  
**LUMBER (Ceiling, Flooring,  
Siding.)**  
**Jackson Lumber Co.**, Lockhart, Ala.  
**—(Creosoted.)**  
**Amer. Creosote Wks., Inc.**, New Orleans.  
**Atlantic Creosoting Co.**, Norfolk, Va.  
**Ayer & Lord Tie Co., Inc.**, Chicago.  
**Century Wood Preserving Co.**, Balto., Md.  
**Eppinger & Russell Co.**, New York, N. Y.  
**Gulf States Creos. Co.**, Hattiesburg, Miss.  
**National Lumber & Creosoting Co.**, Tex-  
arkana, Ark.-Tex.  
**—(Hardwoods, Cypress, etc.)**  
**Reynolds Bros. Lbr. Co.**, Albany, Ga.  
**—(Heavy Construction, Pitch,  
Pine, etc.)**  
**Reynolds Bros. Lbr. Co.**, Albany, Ga.  
**MACHINERY (Special.)**  
**Bertsch & Co.**, Cambridge City, Ind.  
**Earle Gear & Machine Co.**, Phila., Pa.  
**General Machine Works**, York, Pa.  
**Gerding Bros.**, Cincinnati, O.  
**MACHINERY and Supplies (New  
and Used.)**  
**Cincinnati Mehry & Supply Co.**, Cin-  
cinnati, O.  
**Electric Service Co.**, Cincinnati, Ohio.  
**Guyan Machine Shops**, Logan, W. Va.  
**Marine Metal & Supply Co.**, New York.  
**O'Brien Machinery Co.**, The, Phila., Pa.  
**Partridge, Arthur S.**, St. Louis, Mo.  
**Reading Engineering Wks.**, Reading, Pa.  
**MACHINE TOOLS. (Used.)**  
**Delta Equipment Co.**, Philadelphia, Pa.  
**O'Brien Machinery Co.**, Philadelphia, Pa.  
**MAIL CHUTES.**  
**Cutler Mail Chute Co.**, Rochester, N. Y.  
**MARBLE (Producers and Manu-  
facturers.)**  
**Georgia Marble Co.**, The, Tate, Ga.  
**METAL Cutting Machinery.**  
**Earle Gear & Machine Co.**, Phila., Pa.  
**METAL STAMPING.**  
**Gerding Bros.**, Cincinnati, O.  
**MILL MACHINERY and SUP-  
PLIES.**  
**Lombard Iron Works & Supply Co.**, Au-  
gusta, Ga.  
**MIXERS (Hot.)**  
**National Equip. Corp.**, (Kochring, T. L.  
Smith, Kwik-Mix), Milwaukee, Wis.  
**—(Plaster and Mortar.)**  
**Dunning & Boschert Press Co.**, Syracuse,  
N. Y.  
**Jaeger Machine Co.**, Columbus, Ohio.  
**MOTORS (Electric.)**  
**Allis-Chalmers Mfg. Co.**, Milwaukee, Wis.  
**Armstrong & Bro. Co.**, R. S., Atlanta, Ga.  
**Fairbanks, Morse & Co.**, Chicago, Ill.  
**General Electric Co.**, Schenectady, N. Y.  
**Western Electric Co.**, New York City.  
**MOTOR TRUCKS.**  
**International Harvester Co. of America**,  
Inc., Chicago, Ill.  
**NAILS (Cut.)**  
**Reading Iron Co.**, Reading, Pa.  
**NAILS and Spikes.**  
**American Steel & Wire Co.**, Balto., Md.  
**Tennessee Coal, Iron & Railroad Co.**,  
Birmingham, Ala.  
**Youngtown Sheet & Tube Co.**, Youngs-  
town, Ohio.



**OIL (Fuel and Gas.)**  
Gulf Refining Co., Pittsburgh, Pa.

—Cups.  
Lunkenheimer Co., The, Cincinnati, O.

**ORE-WASHING MACHINERY.**  
Georgia Iron Works, Augusta, Ga.

**ORNAMENTAL Bronze Work.**  
Heath Co., J. S., Waukegan, Ill.

**ORNAMENTAL Iron Work.**  
Austin Bros. Bridge Co., Atlanta, Ga.  
Dietrich Bros., Baltimore, Md.  
Roanoke Iron & Bridge Wks., Roanoke, Va.  
Snead Architectural Iron Works, Louisville, Ky.  
Virginia Bridge & Iron Co., Roanoke, Va.

**ORNAMENTAL Metal Work.**  
(Bronze, Iron, Steel, etc.)  
Cincinnati Mfg. Co., Cincinnati, O.

**PAINT (Preservative.)**  
Cabot, Inc., Samuel, Boston, Mass.

**PANELBOARDS.**  
Adam Electric Co., Frank, St. Louis.

**PARTITIONS (Sectionfold, Rolling, Wood.)**  
Wilson Corp., The, J. G., New York.

**PATENT ATTORNEYS.**  
Buck, Sterling P., Washington, D. C.  
Coleman, Watson E., Washington, D. C.  
Eaton, Paul B., Charlotte, N. C.  
Sasnett, Edward C., Washington, D. C.  
Seymour & Bright, Washington, D. C.

**PATTERNS (Drawing, etc.)**  
Haas Pattern Co., A. W., Atlanta, Ga.

**PAVING (Asphaltic Concrete.)**  
Culbert & Sons, W. F., Marion, Va.

**PAVING Blocks (Creosoted Wood.)**  
American Creosote Works, New Orleans.  
Ayer & Lord Tie Co., Chicago, Ill.  
Century Wood Preserving Co., Balto., Md.

**PAVING Mixers.**  
National Equip. Corp., (Koehring, T. L. Smith), Milwaukee, Wis.

**PENSTOCKS.**  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Smith Co., S. Morgan, York, Pa.

**PERFORATED METAL.**  
Chicago Perforating Co., Chicago, Ill.  
Erdie Perforating Co., Rochester, N. Y.  
Harrington & King Perf. Co., Chicago.  
Hendrick Mfg. Co., Carbondale, Pa.  
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.  
Mundt & Sons, Charles, Jersey City, N. J.

**PETROLEUM REFINERS.**  
Gulf Refining Co., Pittsburgh, Pa.

**PIG-IRON.**  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**PILES, POSTS, Poles (Creosoted.)**  
American Creosote Wks., New Orleans, La.  
Atlantic Creosoting Co., Norfolk, Va.  
Ayer & Lord Tie Co., Chicago, Ill.  
Century Wood Preserving Co., Balto., Md.  
National Lumber & Creosoting Co., Texarkana, Ark.-Tex.

**PILING—(Steel Sheet.)**  
Carnegie Steel Co., Pittsburgh, Pa.

—(Yellow Pine.)  
Century Wood Preserving Co., Balto., Md.  
Jackson Lumber Co., Lockhart, Ala.

**PIPE.**  
Albert & Davidson Pipe Corp., Brooklyn, N. Y.  
Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.  
Birmingham Boiler & Engr. Co., Birmingham, Ala.  
Central Pipe & Supply Co., Charleston, W. Va.  
Greenpoint Iron & Pipe Co., Brooklyn, N. Y.  
Hudson Pipe & Supply Co., Bayonne, N. J.  
Maryland Pipe & Steel Corp., Baltimore, Md.  
McDowell Pipe Corp., Brooklyn, N. Y.  
National Tube Co., Pittsburgh, Pa.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Wides Pipe & Supply Co., Cincinnati, O.

—(Cast Iron.)  
Cast Iron Pipe Research Assn., Chicago.

Glamorgan Pipe & Fdry. Co., Lynchburg, Va.  
U. S. Pipe & Fdry. Co., Burlington, N. J.

—(Hammer-Welded.)  
National Tube Co., Pittsburgh, Pa.

—(Iron and Steel, Spiral Welded.)  
American Rolling Mill Co., Middletown, O.

—(Second-Hand.)  
Albert & Davidson Pipe Corp., Brooklyn, N. Y.  
Albert Pipe Sup. Co., Brooklyn, N. Y.  
Central Pipe & Sup. Co., Charleston, W. Va.  
Greenpoint Iron & Pipe Co., Brooklyn, N. Y.  
Hudson Pipe & Supply Co., Bayonne, N. J.  
Marine Metal & Supply Co., New York.  
Maryland Pipe & Steel Corp., Baltimore, Md.  
McDowell Pipe Corp., Brooklyn, N. Y.  
Wides Pipe & Supply Co., Cincinnati, O.

—(Steel.)  
Bethlehem Steel Co., Bethlehem, Pa.  
National Tube Co., Pittsburgh, Pa.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

—(Wrought Iron.)  
Reading Iron Co., Reading, Pa.

**PIPE (Fittings.)**  
Georgia Iron Works, Augusta, Ga.

**PIPE Machinery.**  
Quinn Wire & Iron Works, Boone, Iowa.

—Unions and Joints.  
Dart Mfg. Co., E. M., Providence, R. I.

—Systems (Industrial.)  
Moore Pipe & Sprinkler Co., Jacksonville, Fla.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.

**PLATES (Steel and Iron.)**  
American Rolling Mill Co., Middletown, O.  
Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Gulf States Steel Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**POLES—(Tubular, Steel.)**  
Bessemer Galvanizing Works, Birmingham, Ala.  
National Tube Co., Pittsburgh, Pa.  
—(Yellow Pine.)  
Century Wood Preserving Co., Balto., Md.  
Jackson Lumber Co., Lockhart, Ala.

**POLISHING MACHINERY.**  
(Wheels, Blocks.)  
Carborundum Co., Niagara Falls, N. Y.

**POSTS (Steel Fence.)**  
Atlantic Steel Co., Atlanta, Ga.

**POWER TRANSMISSION MACHINERY.**  
Shofield's Sons Co., J. S., Macon, Ga.

**PRESSES. (Baling, Cottonseed Oil, Hydraulic and Power.)**  
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

**PRINTERS (Book, Catalog, Job.)**  
Smith & Son Co., Oscar T., Baltimore, Md.  
Young & Selden Co., Baltimore, Md.

**PULLEYS (Friction Clutch.)**  
Caldwell Co., Inc., W. E., Louisville, Ky.

**PULVERIZED COAL EQUIPMENT.**  
Fuller Lehigh Co., Fullerton, Pa.

**PULVERIZERS. (See Crushing and Pulverizing Machinery.)**

**PUMPING MACHINERY.**  
Fairbanks, Morse & Co., Chicago, Ill.  
La Bour Co., Elkhart, Ind.  
Layne & Bowler, Inc., Memphis, Tenn.  
Myers & Bro. Co., The F. E., Ashland, O.  
Virginia Mch. & Well Co., Richmond, Va.

**PUMPS (Boiler Feed.)**  
DeLaval Steam Turbine Co., Trenton, N. J.  
Myers & Bro. Co., The F. E., Ashland, O.

—(Centrifugal.)  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
DeLaval Steam Turbine Co., Trenton, N. J.  
Fairbanks, Morse & Co., Chicago, Ill.  
La Bour Co., Elkhart, Ind.  
Layne & Bowler, Inc., Memphis, Tenn.

—(Deep Well.)  
Layne & Bowler, Inc., Memphis, Tenn.

—(Hydraulic.)  
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

—(Pulverized Coal.)  
Fuller Lehigh Co., Fullerton, Pa.

—(Sand and Dredging.)  
Georgia Iron Works, Augusta, Ga.

—(Steam.)  
Fairbanks, Morse & Co., Chicago, Ill.

—(Water Works.)  
Layne & Bowler, Inc., Memphis, Tenn.

**PUNCHING AND SHEARING MACHINERY.**  
Bertsch & Co., Cambridge City, Ind.  
Whitney Metal Tool Co., Rockford, Ill.

**RADIATOR ENCLOSURES.**  
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

**RAILINGS (Iron Pipe.)**  
Pipe Railing Constr. Co., Long Island City, N. Y.

**RAILROAD Equipment and Supplies (New.)**  
Robinson & Orr, Pittsburgh, Pa.

—Equipment and Supplies (Used.)  
Dyer Co., W. H., St. Louis, Mo.  
Smith & Co., W. M., Birmingham, Ala.  
Southern Iron and Equip. Co., Atlanta.

**RAILROAD (Frogs and Switches)**  
Robinson & Orr, Pittsburgh, Pa.

**RAILROADS — (Offering Industrial, Agricultural and Commercial Opportunities.)**  
Missouri Pacific R. R., St. Louis, Mo.  
Model Land Company, Flagler System, St. Augustine, Fla.  
Norfolk & Western Railway, Roanoke, Va.

**RAILS (New and Used.)**  
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Dyer Co., W. H., St. Louis, Mo.  
Robinson & Orr, Pittsburgh, Pa.

Smith & Co., W. M., Birmingham, Ala.  
Southern Iron & Equip. Co., Atlanta, Ga.  
Sweet's Steel Co., Williamsport, Pa.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**RAILWAYS (Marine.)**  
Charleston Dry Dock and Machine Co., Charleston, S. C.

**RECEPTACLES (Self-Closing—Waste Paper.)**  
Whitaker Paper Co., Baltimore, Md.

**REINFORCING for Concrete.**  
American Steel and Wire Co., Balto., Md.  
Atlantic Steel Co., Atlanta, Ga.  
Austin Bros. Bridge Co., Atlanta, Ga.  
Carnegie Steel Co., Pittsburgh, Pa.  
Dietrich Brothers, Baltimore, Md.  
Gulf States Steel Co., Birmingham, Ala.

**RIVER & HARBOR IMPROVEMENTS (Dredging, Docks, Wharves, etc.)**  
Arundel Corp., Baltimore, Md.  
Atlantic Gulf and Pacific Co., New York.

**ROAD and Street Machinery.**  
Austin-Western Road Machinery Co., Chicago, Ill.  
Buffalo-Springfield Roller Co., Springfield, O.

Caterpillar Tractor Co., Peoria, Ill.  
Gallon Iron Wks. & Mfg. Co., Gallon, O.

—and Street Material.  
Boxley & Co., W. W., Roanoke, Va.  
Koppers Products Co., Pittsburgh, Pa.  
Woodstock Slag Corp., Birmingham, Ala.

—Graders and Scrapers.  
Austin-Western Road Machinery Co., Chicago, Ill.  
Caterpillar Tractor Co., Peoria, Ill.  
Gallon Iron Wks. & Mfg. Co., Gallon, O.

—Oils and Preservatives.  
Gulf Refining Co., Pittsburgh, Pa.

—Rollers (Steam and Gasoline.)  
Austin-Western Road Machinery Co., Chicago, Ill.  
Buffalo-Springfield Roller Co., Springfield, O.

—Scarifiers.  
Austin-Western Road Machinery Co., Chicago, Ill.  
Buffalo-Springfield Roller Co., Springfield, O.

**ROOFING (Asphalt Built-Up.)**  
Barber Asphalt Co., Philadelphia, Pa.

—(Ready Prepared, Felt, Tar Asbestos, Asphalt.)  
Ruberoil Co., New York City.

**ROOFING and Siding (Composition.)**  
Ruberoil Co., New York City.

—(Metal.)  
American Rolling Mill Co., Middletown, O.  
American Sheet and Tin Plate Co., Pittsburgh, Pa.  
Gulf States Steel Co., Birmingham, Ala.  
Youngstown Sheet and Tube Co., Youngstown, O.

**SAFES.**  
York Safe & Lock Co., York, Penna.

**SAND.**  
Arundel Corp., Baltimore, Md.  
Friend & Co., Inc., Petersburg, Va.  
Georgia Sand & Gravel Co., Augusta, Ga.

**SANITARY Drinking Fountains.**  
Rundle-Spence Mfg. Co., Milwaukee, Wis.

**SAWMILL Machinery.**  
Schofield's Sons Co., J. S., Macon, Ga.

**SAWS (Cold Metal.)**  
Earle Gear and Machine Co., Phila., Pa.

**SCALES (Auto Truck.)**  
Fairbanks, Morse & Co., Chicago, Ill.

**SCRAP IRON AND STEEL.**  
Smith & Co., W. M., Birmingham, Ala.

**SCREEN CLOTH.**  
Seneca Wire & Mfg. Co., Fostoria, Ohio.

**SCREENING (For Concrete and Road Construction.)**  
American Limestone Co., Knoxville, Tenn.

**SCREENS (Sand, Gravel, Stone, Coal, Ore, etc.)**  
Chicago Perforating Co., Chicago, Ill.  
Erdie Perforating Co., Rochester, N. Y.  
Grundler Crusher & Pulverizer Co., St. Louis, Mo.  
Hendrick Mfg. Co., Carbondale, Pa.  
Mundt & Sons, Charles, Jersey City, N. J.

**SCREW-Machine Products.**  
Progressive Mfg. Co., Torrington, Conn.

**SEAWALLS.**  
Shore-Line Builders, Inc., Jacksonville, Fla.

**SEWAGE Disposal Systems.**  
D-N Corporation, Winston-Salem, N. C.

**SEWER Joint Compounds.**  
Leadite Co., Philadelphia, Pa.

—Pipe (Vitrified.)  
Bannon Pipe Co., Louisville, Ky.  
Lee Clay Products Co., Clearfield, Ky.  
Owensboro Sewer Pipe Co., Owensboro, Ky.

**SEWER Pipe Machinery.**  
Quinn Wire & Iron Works, Boone, Iowa.

**SHAFTING Material (Tubular.)**  
National Tube Co., Pittsburgh, Pa.

**SHARPENING Stones.**  
Carborundum Co., Niagara Falls, N. Y.

**SHEET Steel and Iron.**  
American Sheet and Tin Plate Co., Pittsburgh, Pa.  
Bethlehem Steel Co., Bethlehem, Pa.  
Gulf States Steel Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Youngstown Sheet & Tube Co., Youngstown, O.

—Metal Working Machinery.  
Bertsch & Co., Cambridge City, Ind.  
Whitney Metal Tool Co., Rockford, Ill.

**SHEETS (Asbestos.)**  
Ruberoil Co., New York City.

—(Galvanized and Black.)  
American Rolling Mill Co., Middletown, O.  
American Sheet & Tin Plate Co., Pittsburgh, Pa.

**SHINGLES (Asbestos.)**  
Ruberoil Co., New York City.

**SHIPBUILDING.**  
Charleston Dry Dock & Machine Co., Charleston, S. C.

**SHOVELS (Steam, Gas and Electric Power.)**  
Austin-Western Road Machinery Co., Chicago, Ill.  
Bucyrus-Erie Co., So. Milwaukee, Wis.  
Byers Machine Co., Ravenna, O.  
National Equipment Corp. (Koehring), Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.

**SILICATE OF SODA.**  
Grasselli Chemical Co., Inc., Birmingham.

**SITES (Manufacturing.)**  
Appalachian Electric Power Co., Roanoke, Va.  
Crisp County Power Co., Cordele, Ga.  
Galveston, Texas, City of.  
Industrial Commission, N. C.  
Missouri Pacific R. R., St. Louis, Mo.  
Model Land Company (Flagler System), St. Augustine, Fla.  
Norfolk & Western Railway, Roanoke, Va.

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—(Furnace.)  
Woodstock Slag Corp., Birmingham, Ala.

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American Steel & Wire Co., Chicago, Ill.  
Roebbing's Sons Co., John A., Trenton, N. J.

**SLUICE GATES AND APPLIANCES.**  
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Bethlehem Steel Co., Bethlehem, Pa.  
Sweet's Steel Co., Williamsport, Pa.

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—(Wire—All Kinds.)  
American Steel & Wire Co., Balto., Md.

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Moore Pipe & Sprinkler Co., Jacksonville, Fla.

**STACKS (Iron and Steel.)**  
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Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Hedges Walsh Weldner Co., Chattanooga.  
Ingalls Iron Works Co., Birmingham, Ala.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
U. S. Pipe & Foundry Co., Burlington, N. J.  
Virginia Bridge & Iron Co., Roanoke, Va.

**STAINS (Shingle, Woodwork.)**  
Cabot, Inc., Samuel, Boston, Mass.

**STAIR TREADS.**  
Central Iron & Steel Co., Harrisburg, Pa.

**STANDPIPES.**  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

**STATIONERS (Envelopes, Letter and Billheads, etc.)**  
Smith & Son Co., Oscar T., Balto., Md.  
Young & Seiden Co., Baltimore, Md.

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Lunkenheimer Co., The, Cincinnati, O.  
Mueller Co., Decatur, Ill.

**STEEL.**  
American Rolling Mill Co., Middletown, O.  
Bethlehem Steel Co., Bethlehem, Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Dietrich Brothers, Baltimore, Md.  
Gulf States Steel Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.  
—(Cold Rolled.)  
American Steel & Wire Co., Balto., Md.  
—(Fabricators.)  
United Welding Co., Middletown, O.  
—(Tool, High Speed.)  
Bethlehem Steel Co., Bethlehem, Pa.

**STEEL Buildings (Designers and Builders.)**  
American Bridge Co., Pittsburgh, Pa.  
Belmont Iron Works, Philadelphia, Pa.  
Carolina Steel & Iron Co., Greensboro, N. C.  
Ingalls Iron Works Co., Birmingham, Ala.  
McClintic-Marshall Corp., Bethlehem, Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.  
—Plate Construction (Riveted or Welded.)  
Birmingham Boiler & Engr. Co., Birmingham, Ala.  
Birmingham Tank Co., Birmingham.  
Bristol Steel & Iron Works, Inc., Bristol, Va.  
Carolina Steel & Iron Co., Greensboro, N. C.  
Central Iron & Steel Co., Harrisburg, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Hedges Walsh Weldner Co., Chattanooga.  
Ingalls Iron Works Co., Birmingham, Ala.  
McClintic-Marshall Corp., Bethlehem, Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
United Welding Co., Middletown, O.

**STOKERS (Mechanical.)**  
Alabama Stoker & Boiler Co., Birmingham, Ala.  
Babcock & Wilcox Co., The, New York.  
Detroit Stoker Company, Detroit, Mich.

**STORAGE.**  
General Warehouse & Storage Co., Atlanta, Ga.

**STRUCTURAL STEEL AND IRON.**  
American Bridge Co., Pittsburgh, Pa.  
Austin Bros. Bridge Co., Atlanta, Ga.  
Belmont Iron Works, Philadelphia, Pa.  
Bristol Steel & Iron Works, Inc., Bristol, Va.  
Carnegie Steel Co., Pittsburgh, Pa.  
Carolina Steel & Iron Co., Greensboro, N. C.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Dietrich Brothers, Baltimore, Md.  
Ingalls Iron Works Co., Birmingham, Ala.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Roanoke Iron & Bridge Works, Inc., Roanoke, Va.  
Snead Architectural Iron Works, Louisville, Ky.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.

**SULPHATE OF ALUMINA.**  
Grasselli Chemical Co., Inc., Birmingham.

**SULPHIDE OF SODA.**  
Grasselli Chemical Co., Inc., Birmingham.

**SULPHURIC ACID.**  
Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

**SUPER-HEATERS (Steam.)**  
Babcock & Wilcox Co., The, New York.

**SURFACING (Roads and Streets)**  
Culbert & Sons, W. F., Marion, Va.  
Koppers Products Co., Pittsburgh, Pa.

**SURVEYS (Industrial.)**  
Technical Service Co., New York, N. Y.  
—(Quantity.)  
Martin, Joe B., Washington, D. C.  
Spring, Charles Herbert, Greensboro, N. C.

**SURVEYING INSTRUMENTS.**  
Weber Co., Inc., F., Philadelphia, Pa.

**SWINGING ENGINES.**  
Dake Engine Co., Grand Haven, Mich.

**SWITCHBOARDS, SWITCHES, ETC.**  
General Electric Co., Schenectady, N. Y.

**SYSTEMS (Business.)**  
Ernst & Ernst, New York, N. Y.

**TANKS (Air Compressor.)**  
Titusville Iron Works Co., Titusville, Pa.  
—(Elevated Steel.)  
Caldwell Co., Inc., W. E., Louisville, Ky.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Cole Mfg. Co., R. D., Newnan, Ga.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
Virginia Bridge & Iron Co., Roanoke, Va.  
—(Elevated Wood.)  
Caldwell Co., Inc., W. E., Louisville, Ky.  
Davis & Son, G. M., Palatka, Fla.  
—(Iron and Steel.)  
American Bridge Co., Pittsburgh, Pa.  
Birmingham Tank Co., Birmingham, Ala.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Cole Mfg. Co., R. D., Newnan, Ga.  
Finnigan Co., Inc., J. J., Atlanta, Ga.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
McClintic-Marshall Corp., Bethlehem, Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
Titusville Iron Works Co., Titusville, Pa.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Westinghouse Traction Brake Co., Wilmerding, Pa.

—(Seamless Steel.)  
National Tube Co., Pittsburgh, Pa.  
—(Storage, Oil, etc.)  
Birmingham Boiler & Engr. Co., Birmingham, Ala.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Wks., Birmingham.  
Ingalls Iron Works Co., Birmingham, Ala.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Titusville Iron Works Co., Titusville, Pa.  
United Welding Co., Middletown, O.  
—(Wood.)  
Caldwell Co., Inc., W. E., Louisville, Ky.  
Davis & Son, G. M., Palatka, Fla.  
Virginia Mch. & Well Co., Richmond, Va.

**TARPAULINS.**  
Atlanta Tent & Awning Co., East Point, Ga.  
Fulton Bag & Cotton Mills, Atlanta, Ga.

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Ernst & Ernst, New York, N. Y.

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American Telephone & Telegraph Co.

**TENTS.**  
Fulton Bag & Cotton Mills, Atlanta, Ga.

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Grasselli Chemical Co., Inc., Birmingham.

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Hood Co., B. Mifflin, Daisy, Tenn.

—(Roof.)  
Hood Co., B. Mifflin, Daisy, Tenn.

—(Sewer.)  
Lee Clay Products Co., Clearfield, Ky.

**TIN AND TERNE PLATES.**  
American Sheet & Tin Plate Co., Pittsburgh, Pa.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

**TOOLS AND DIES.**  
Gerding Bros., Cincinnati, O.

**TOWERS (Electric Transmission.)**  
American Bridge Co., Pittsburgh, Pa.  
Bessemer Galvanizing Works, Birmingham, Ala.

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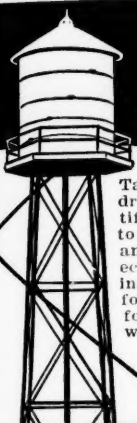
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